ORDER NO.ODSD010305C1

B12

Service Manual

DVD Player

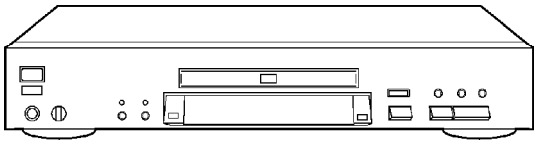
DVD-RP91

Colour

(N).....Shampagne Gold Type

Area

D.....U.S.A. and Canada.



SPECIFICATIONS

Specifications

Power supply:	**AC120 V, 60 Hz**
Power consumption:	**16 W**
Dimensions:	**430 (W)×265 (D)×99 (H) mm (excluding protrusions)**
Mass:	**3.5 kg (7.72 lb.)**
Signal system:	**NTSC**
Operating temperature range:	**+5 to +35°C (+41 to +95°F)**
Operating humidity range:	**5-90 % RH (no condensation)**
Discs played:	
(1) DVD-Video disc	
(2) Compact disc (CD-DA, Video CD)	
(3) CD-R/CD-W	
(4) DVD-RAM	
Video output:	
Output level:	**1 Vp-p (75 Ω)**
Output terminal:	**Pin jack (2 system)**
S video output:	
Y output level:	**1 Vp-p (75 Ω)**
C output level:	**0.286 Vp-p (75 Ω)**
Output terminal:	**S terminal (1 system)**
Component video output:	
Y output level:	**1 Vp-p (75 Ω)**
PBoutput level:	**0.7 Vp-p (75 Ω)**

PRoutput level:	0.7 Vp-p (75 Ω)
Output terminal:	Pin jack (1 system) (Y: green, PB: blue, PR: red)

Audio output:

Output level:	2 Vrms (1 kHz, 0 dB, 10K Ω load impedance)
Output terminal:	
Mixed output (L/R):	Pin jack (1 system)
5.1ch discrete output (5.1ch):	Pin jack (1 system)

Audio signal output characteristics:

(1) Frequency response:	
■ DVD (linear audio):	4 Hz-22 kHz (48 kHz sampling) 4 Hz-44 kHz (96 kHz sampling)
■ CD audio:	4 Hz-20 kHz
(2) S/N ratio:	
■ CD audio:	115 dB
(3) Dynamic range:	
■ DVD (linear audio):	103 dB
■ CD audio:	99 dB
(4) Total harmonic distortion:	
■ CD audio:	0.0025 %

Digital audio output:

Optical digital output:	Optical terminal
Coaxial digital output:	Pin jack

Pickup

Wave length:	658 nm/790 nm
Laser power:	CLASS 2a/CLASS 1

Power consumption in standby mode:

approx. 2 W

Notes:

Specifications are subject to change without notice.

Mass and dimensions are approximate.

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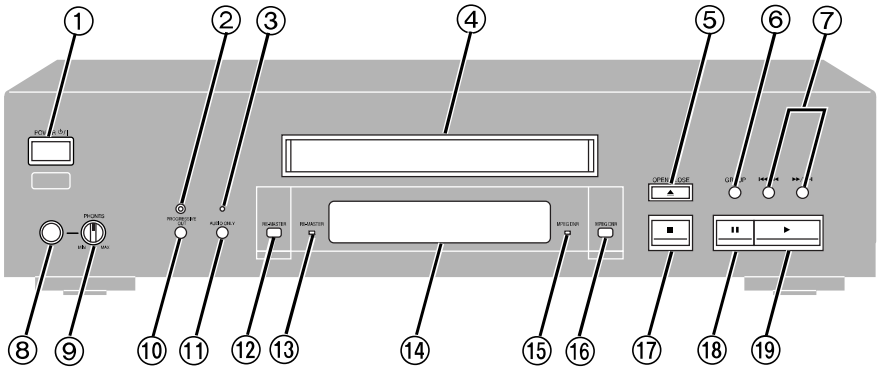
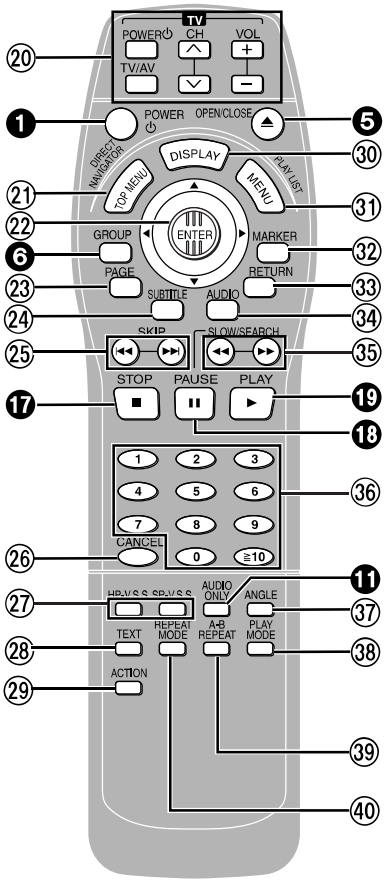
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

1. SAFETY PRECAUTIONS





Buttons such as ❶ function the same as the controls on the unit.

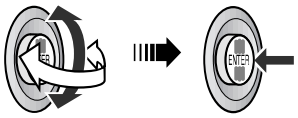
Main unit

① **Standby/on switch (POWER ⏻/I)**
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
② **PROGRESSIVE OUT indicator (PROGRESSIVE OUT)**
③ **AUDIO ONLY indicator (AUDIO ONLY)**
④ **Disc tray**
⑤ **Disc tray open/close button (⏏, OPEN/CLOSE)**
⑥ **GROUP button (GROUP)**
⑦ **Skip/Search buttons (I◄◄/◄◄, ►►/►►I)**
⑧ **Headphone jack**
⑨ **Headphone level control (PHONES)**
⑩ **PROGRESSIVE OUT button (PROGRESSIVE OUT)**
⑪ **AUDIO ONLY button (AUDIO ONLY)**
⑫ **RE-MASTER button (RE-MASTER)**
⑬ **RE-MASTER indicator (RE-MASTER)**
⑭ **Display**
⑮ **MPEG DNR indicator (MPEG DNR)**
⑯ **MPEG DNR button (MPEG DNR)**
⑰ **Stop button (■)**
⑱ **Pause button (❚❚)**
⑲ **Play button (►)**

Remote control

⑳ **Television operation section**
㉑ **Top menu and Direct Navigator button (TOP MENU/DIRECT NAVIGATOR)**
㉒ **Joystick (▲, ▼, ◄, ►)/Enter button (ENTER)**

How to operate the joystick
1. Push it up and down, left and right.
2. Press [ENTER].



㉓ **Page button (PAGE)**
㉔ **Subtitle button (SUBTITLE)**
㉕ **Skip buttons (I◄◄, ►►I SKIP)**
㉖ **Cancel button (CANCEL)**
㉗ **Headphone and Speaker V.S.S. buttons (HP-V.S.S./SP-V.S.S.)**
㉘ **Text button (TEXT)**
㉙ **Action button (ACTION)**
㉚ **Display button (DISPLAY)**
㉛ **Menu and Play List button (MENU/PLAY LIST)**
㉜ **Marker button (MARKER)**
㉝ **Return button (RETURN)**
㉞ **Audio button (AUDIO)**
㉟ **Slow/Search buttons (◄◄, ►► SLOW/SEARCH)**
㊱ **Numbered buttons (1–9, 0, ≧10)**
㊲ **Angle button (ANGLE)**
㊳ **Play mode button (PLAY MODE)**
㊴ **A-B repeat button (A-B REPEAT)**
㊵ **Repeat mode button (REPEAT MODE)**

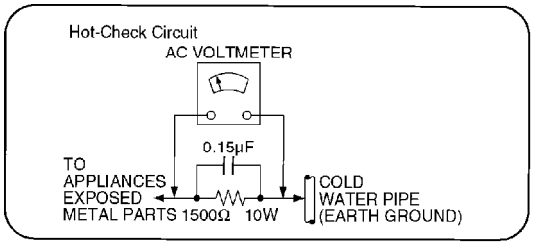
1.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to thechassis, the reading should be between 1M Ω and 5.2M Ω . / When the exposed metal does not have a return path to the chassis, the reading must be∞.

Figure 1



1.1.2. LEAKAGE CURRENT HOT CHECK (SeeFigure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown inFigure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.

4. **Check each exposed metallic part, and measure the voltage at each point.**
5. **Reverse the AC plug in the AC outlet and repeat each of the above measurements.**
6. **The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current mu3st not exceed 1/2 milliamp. In case a measurement is outsideof the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.**

2. PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistorsand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available dischargingESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as alminum foil, to prevent electrostatic charge buildup or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**
4. **Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.**

5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, alminum foil or comparableconductive material).**
7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient todamage an ES device).**

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3. Precaution of Laser Diode

CAUTION:

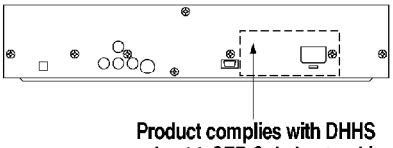
This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wave length:780 nm
Maximum output radiation power from pickup: 100 μ W/VDE
Laser radiation from the pickup lens is safety level,but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

ACHTUNG:

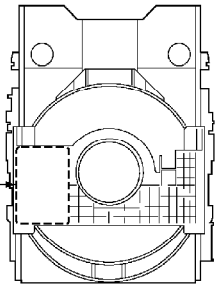
Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Leserstrahlung von der Laserinheit adgestrahit.
Wellenlänge: 780 nm
Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE
Die Strahlungan der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.



Product complies with DHHS rules 21 CFR Subchapter J in effect at date of manufacture.
Matsushita Electric Iudustrial Co., Ltd.
Kadoma, Osaka, Japan

DANGER - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION - VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION - RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO! - AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING - SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL - SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT - SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEN STRAHL AUSSETZEN.
注意 - 計界所有可見及不可見雷射線，開啓後避免直射。
注意 - ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見ない、触れたりしないでください。
ROLS6233



CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4. Product Guide

① High definition progressive-scan picture with clear-cut image and no flickering is made real with employment of 54MHz/12-bit video D/A converter.

Progressive video processing (525p) is employed, which creates a sharp image with double the scan lines of ordinary interlaced scanning (525i). Even when displayed on a large size screen, the picture holds the quality closest to original movie film with high resolution and sharpness free from flickering. In addition, 54MHz/12-bit video D/A converter is employed for progressive scanning. The sampling frequency (times of analog/digital conversion per second), which affects picture quality, has been doubled from conventional 27MHz to 54MHz to gain higher speed and eliminate folded noise to create a picture of still higher quality. The DVD video data recorded with 8-bit is given 12-bit processing enough to reproduce signals in more minute level with precision. Progressive-scan DVD picture has now reached a new advanced level of beauty with high definition.

② Audio D/A converter with 192KHz/24-bit reproduces DVD audio, a music entertainment media far beyond the reach of CD audio.

The reproducible frequency range covers up to approx. 100KHz (approx. 4.4 times of CD) and sound resolution is approx. 1000 times higher than CD. The created sound is so true to real that it even brings player's breath and atmosphere of concert hall to listener's room. The model is capable of maximum six discrete channels of sound reproduction that creates the surrounding sound environment of concert hall in real scale. Moreover, Digital Re-master Processing can reproduce ordinary audio CD by complementing extra high-pitched area beyond 20KHz that is the limit of usual CD reproduction. Depending on the sources of sounds, program algorithm is altered to reproduce optimum sounds in three different modes. Any of audio CD in the collection, pop music, jazz or other genre, can be played in true sounds nearly close to DVD audio clarity to bring advanced level of music entertainment.

③ DVD-RAM disc of 4.7GB recorded by DVD video recorder is reproducible.

The model can play DVD-RAM disc that is capable of digital recording of as long as approx. 4 hours with huge 4.7GB capacity. (The disc in the cartridge should be taken out before use.) TV programs or movie pictures can be played at any time for enjoyment once they are recorded in DVD-RAM disc with DVD format picture and sound of proven quality. Also available is the feature of Program Navigation, which shows the recorded programs in a quick list, as well as the feature of Play List that can play the favored scenes in desired sequence. In addition, the model can play back CD-R and CD-RW data recorded in audio CD format or video CD format.

* The model, as a single unit, can provide video and audio enjoyment from movie pictures to music and TV programs to total user satisfaction.

    * Audio CD-R/RW is playable when it has been finalized, or processed upon completion of recording so that it can be played on audio CD-R/RW player.

④ Complete picture quality adjustments

① Precise picture quality adjustment measures have been amply adopted, which include Adaptive Edge Control to reduce jaggedness around image and caption without affecting the resolution, as well as Horizontal (2-field) and Vertical Sharpness Control, and Gamma Correction. Other functions to create the picture quality adapted to user's taste include special black and white picture mode, sepia colored picture mode, and the picture quality adjustment memory that saves the data of adjustment done with each disc and automatically sets the data next time the disc is played.

② MPEG Digital Noise Reduction (DNR) detects and eliminates the noise accompanying MPEG data compression.

* Block noise reduction
  Block noise is produced when bit rate is insufficient during compression. Block borders are detected and made less noticeable.
* Mosquito noise reduction
  Mosquito noise is a minute noise dotted around the edge that has rapid luminance change. The edge prone to produce mosquito noise is detected and eliminated.
* 3-D noise reduction
  Pictures are compared one another in the time sequence to detect and eliminate noise.

③ Progressive Conversion can be optimized fully in three different ways to movie film source and video source. It performs the conversion of 24p into 60p for film source, 60i into 60p for normal video source, and 30p into 60p for the promising next generation 30p video source that is composed of 480p pictures of 30 frames per second.

⑤ Quality components and circuitry well proven in Technics hi-fi audio technologies

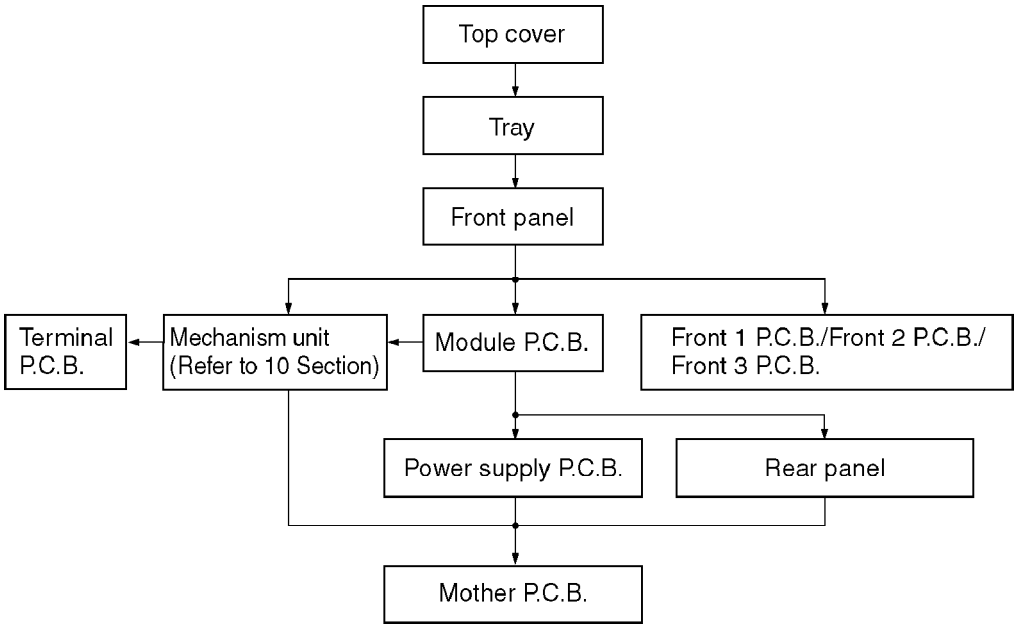
* Virtual Battery Circuit that provides smooth power immune to noise caused by AC power source
* Audio-Only feature that turns off video signals for sound reproduction of purer quality
* CD Jitter-Free Play that stores data into memory and reads them out with the accuracy of quartz clock
* Independent Pure Clock System that employs independent quartz clock in video and audio systems
* Digital Signal Cut-off function that cuts off optical digital signal and coaxial digital signal when digital output is unused.
* Components employed are only those that passed uncompromising selection standards and testing.

5. General Description

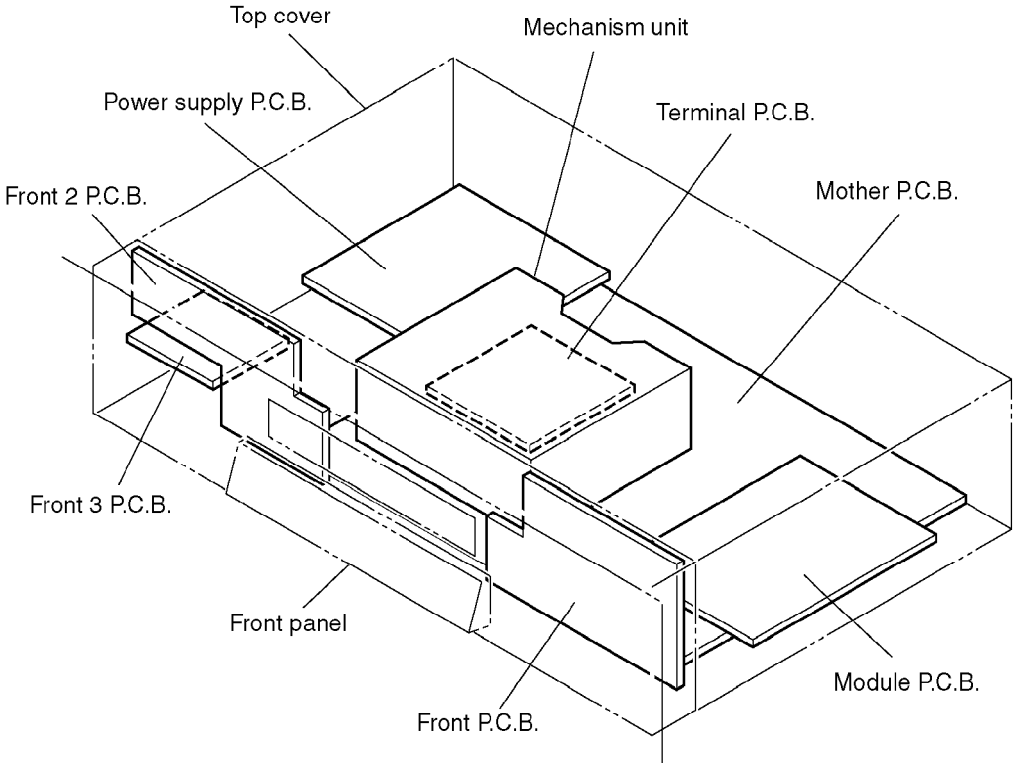
5.1. Operating instructions

6. Disassembling the Casing and Checking P.C.B.s

6.1. Dissasembly Procedure

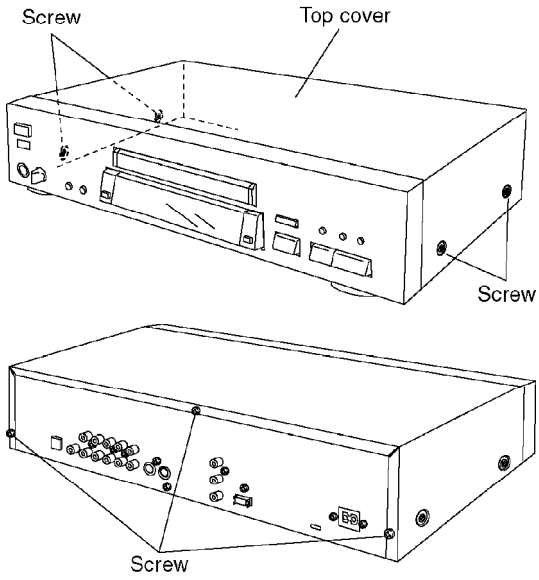


6.2. Caseing Parts and P.C.B. Positions



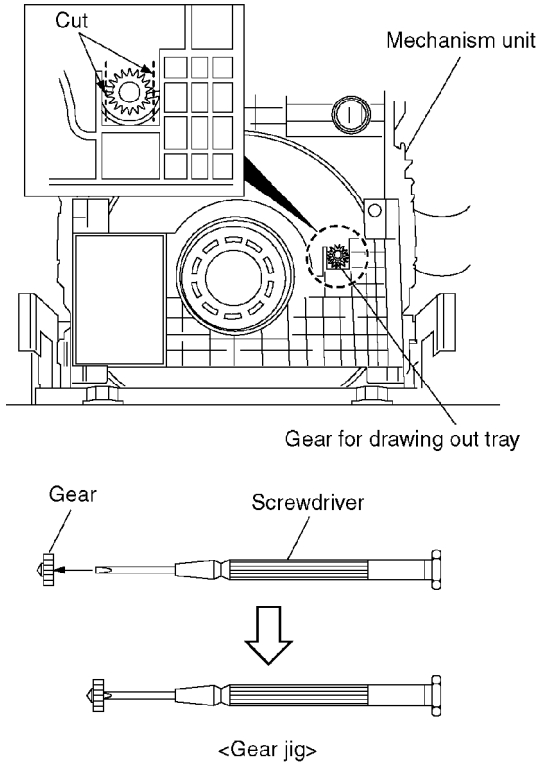
6.3. Top Cover

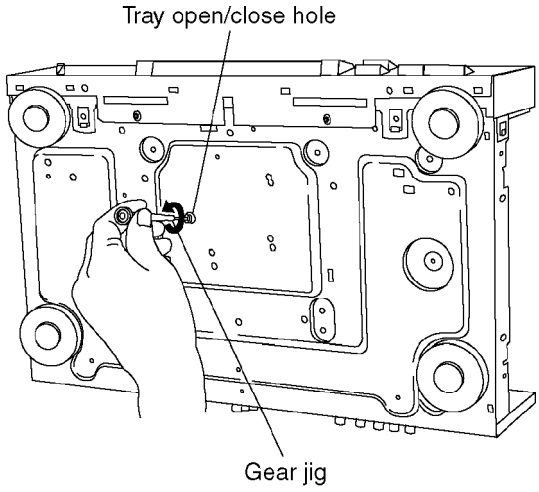
1. Unscrew the screws.

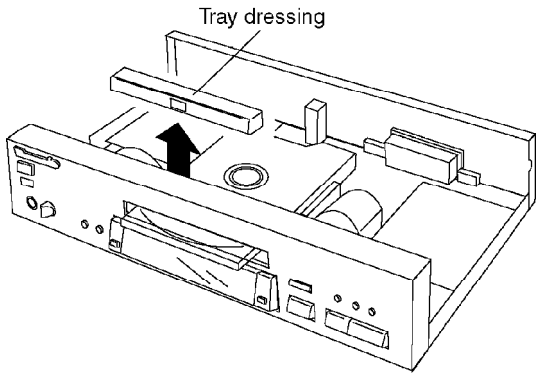


6.4. Tray

1. **Pull the tray out of the mechanism unit. Remove the gear and install it onto a screwdriver to make a gear jig.**
2. **Insert the gear jig into the tray open/close hole.**
3. **Turn the gear jig counterclockwise to open the tray.**
4. **Remove the tray dressing from the tray section.**

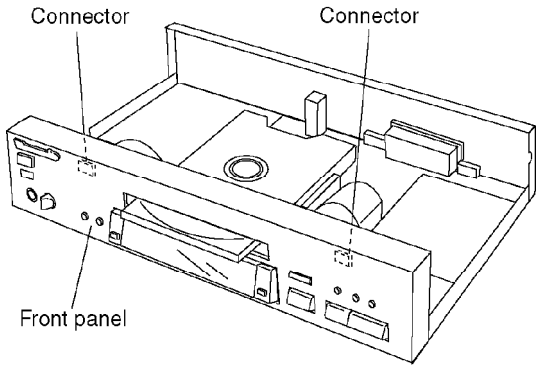






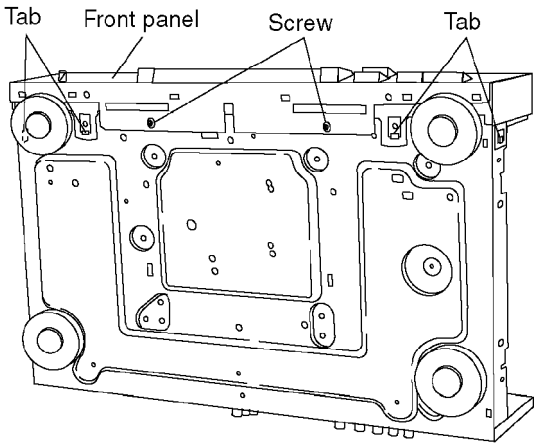
6.5. Front Panel

1. Remove the connectors.



2. Unscrew the screws.

3. Remove the tabs.

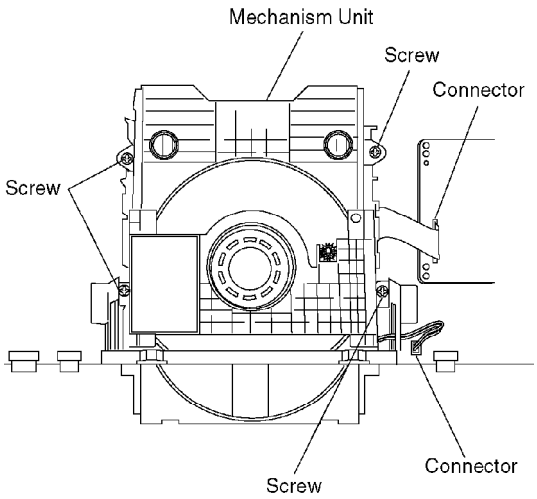


6.6. Mechanism Unit

1. Unscrew the screws.

2. Remove the connectors.

3. Pull out the mechanism unit vertically.

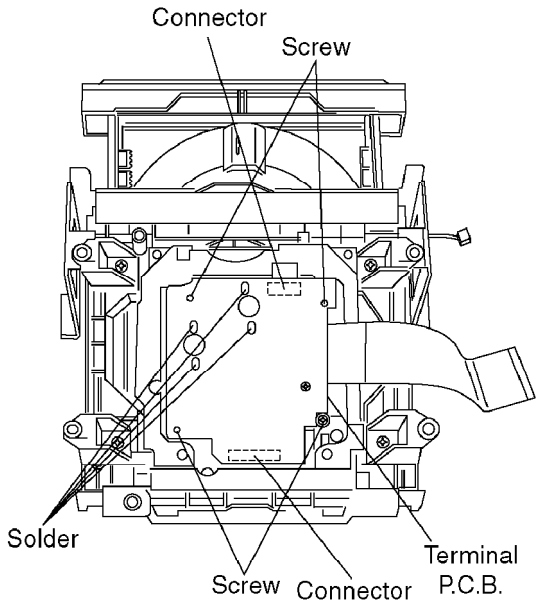


6.7. Terminal P.C.B.

1. Unscrew the screws.

2. Remove the solders.

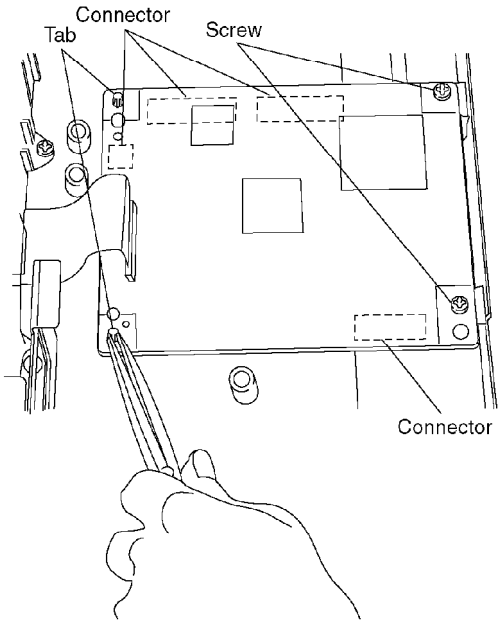
3. Remove the connectors.



<Mechanism unit botton>

6.8. Module P.C.B.

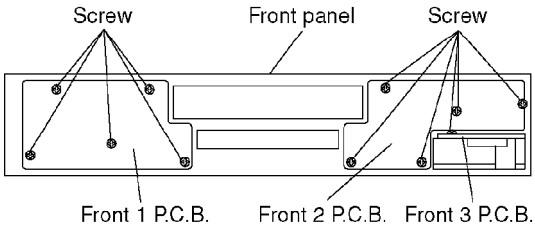
1. Unscrew the screws.
2. Remove the connectors.
3. Press each tab with the nipper to pull out the module P.C.B. vertically.



6.9. Front-1 P.C.B., Front-2 P.C.B., and Front-3 P.C.B.

1. Unscrew the screws.

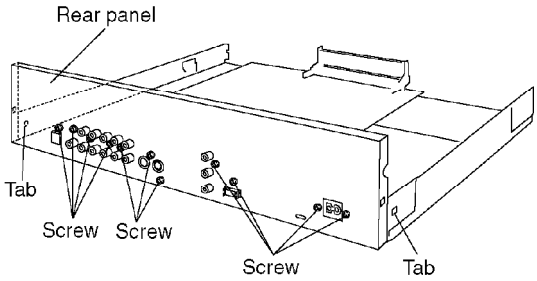
2. Release the tabs.



6.10. Rear panel

1. Unscrew the screws

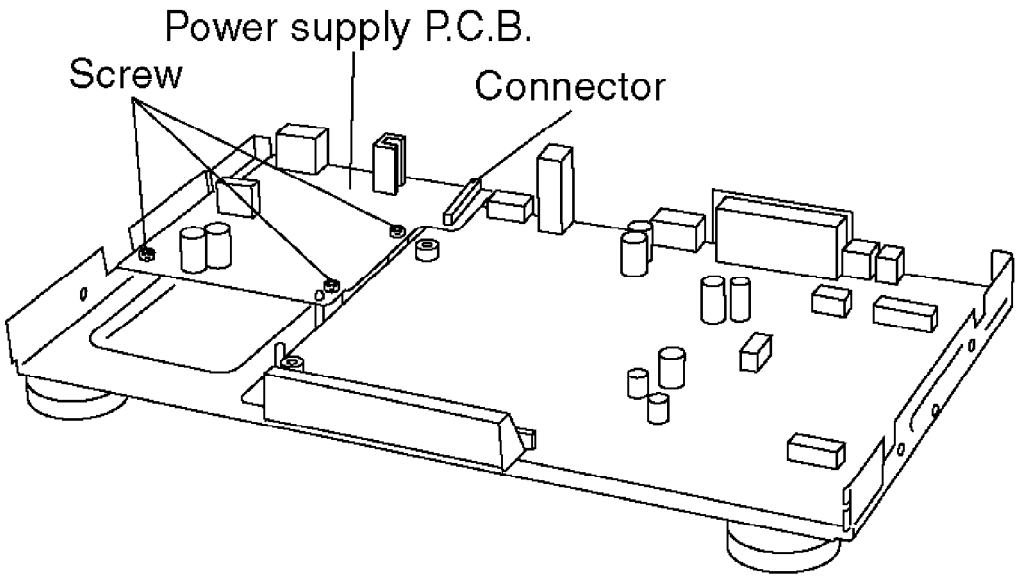
2. Release the tabs.



6.11. Power supply P.C.B.

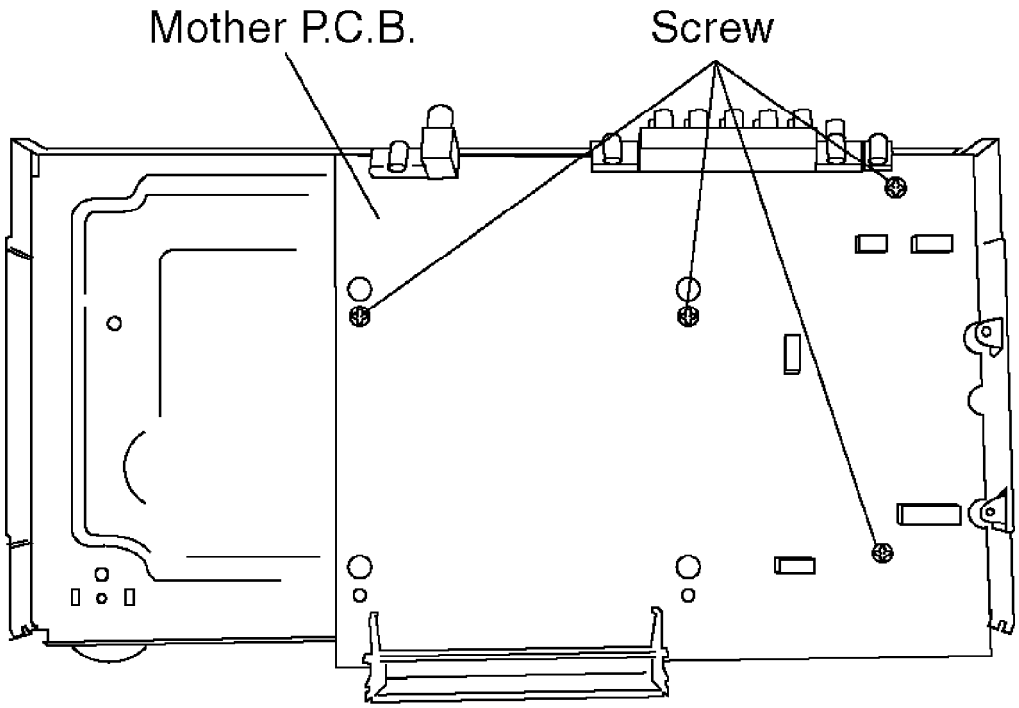
1. Unscrew the screws.

2. Remove the connectors.



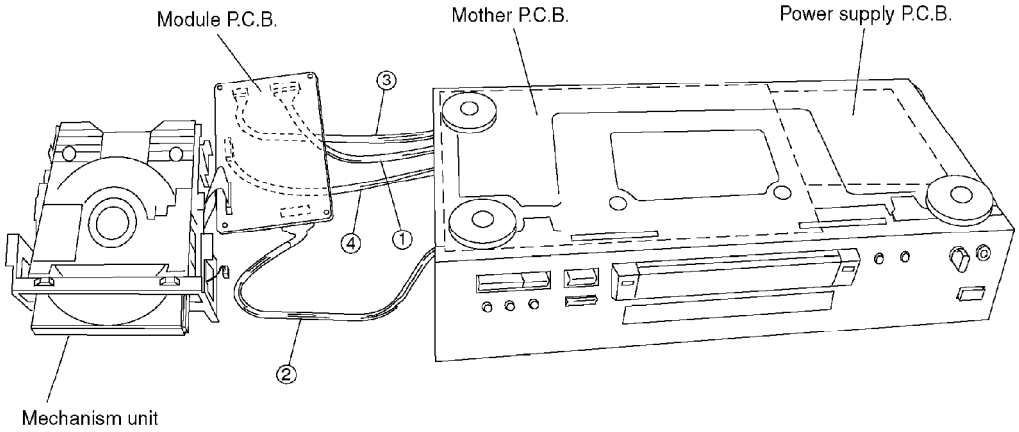
6.12. Mother P.C.B.

1. Unscrew the screws.

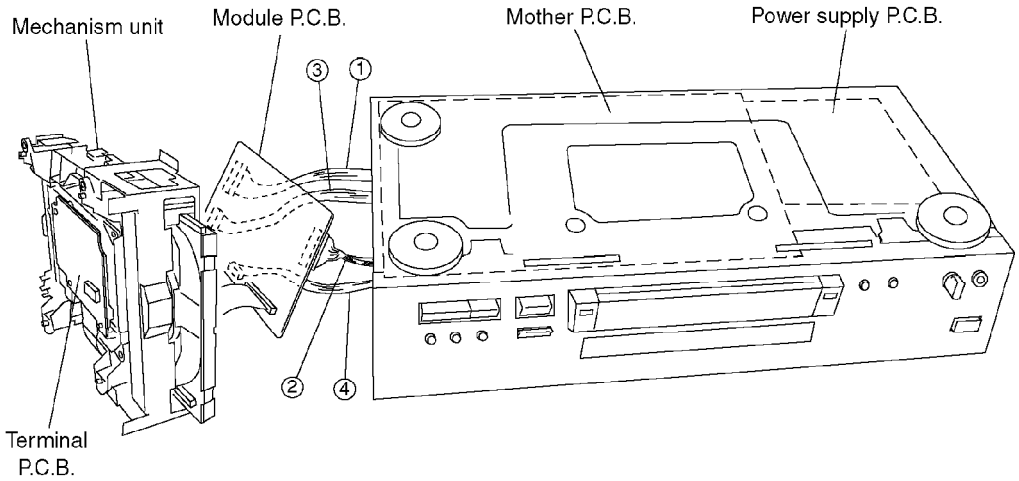


6.13. Servicing Position

6.13.1. Servicing position of the Module P.C.B.



6.13.2. Servicing position of the Terminal P.C.B.



6.13.3. List of the Extention Cables

①	JGS0098	26pins	PS4201 (Module P.C.B.)–PP4201 (Mother P.C.B.)
②	JFKZ0098	18pins	PS6202 (Module P.C.B.)–PP6001 (Mother P.C.B.)
③	RFKZ0097	10pins	PS3201 (Module P.C.B.)–PP3201 (Mother P.C.B.)
④	VUC8026	14pins	PS6251 (Module P.C.B.)–PP1102 (Mother P.C.B.)

7. PREVENTION OF STATIC ELECTRICITY DISCHARGE

The laser diode in the traverse unit (optical pickup) may brake down due to static electricity of clothes or human body. Use due caution to electrostatic breakdown when servicing and handling the laser diode.

7.1. Grounding for electrostatic breakdown prevention

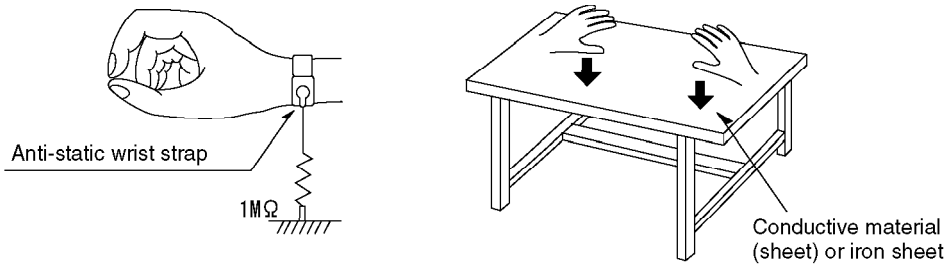
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

7.1.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

7.1.2. Human body grounding

1. Use the anti-static wrist strap to discharge the static electricity form your body.



7.1.3. Handling of optical pickup

1. **To keep the good quality of the optical pickup maintenance parts during transportation and before installation, the both ends of the laser diode are short-circuited. After replacing the parts with new ones, remove the short circuit accordingto the correct procedure. (See this Technical Guide.)**
2. **Do not use a tester to check the laser diode for the optical pickup. Failure to do so will damage the laser diode due to the power supply in the tester.**

7.2. Handling Precautions for Traverse Unit (Optical Pickup)

1. **Do not give a considerable shock to the traverse unit (optical pickup) as it has an extremely high-precise structure.**
2. **When replacing the optical pickup, install the flexible cable and cut its short land with a nipper. See the optical pickup replacement procedure in this Technical Guide. Before replacing the traverse unit, remove the short pin for preventingstatic electricity and install a new unit. Connect the connector as short times as possible.**
3. **The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the cable.**
4. **The half-fixed resistor for laser power adjustment cannot be adjusted. Do not turn the resistor.**

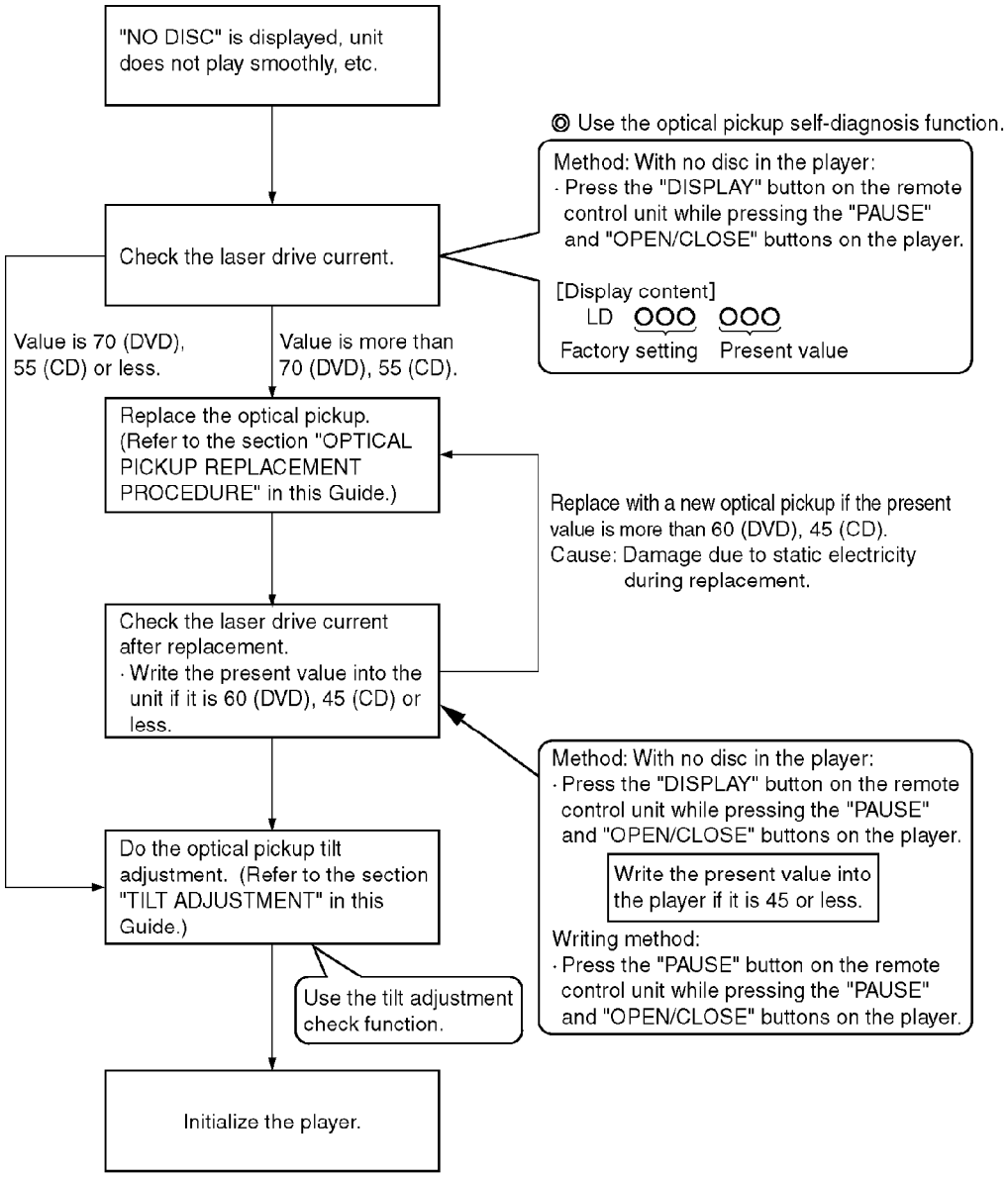
8. OPTICAL PICKUP SELF-DIAGNOSIS AND REPLACEMENT PROCEDURE

8.1. Self-diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective Self-diagnosis and tilt adjustment.Be sure to use the self-diagnosis functionbefore replacing the optical pickup

when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than 55.

Note:
Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)


"NO DISC" is displayed, unit does not play smoothly, etc.
◎ Use the optical pickup self-diagnosis function.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
[Display content]
LD OOO OOO
Factory setting Present value
Check the laser drive current.
Value is 70 (DVD), 55 (CD) or less.
Value is more than 70 (DVD), 55 (CD).
Replace the optical pickup. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Replace with a new optical pickup if the present value is more than 60 (DVD), 45 (CD).
Cause: Damage due to static electricity during replacement.
Check the laser drive current after replacement.
· Write the present value into the unit if it is 60 (DVD), 45 (CD) or less.
Method: With no disc in the player:
· Press the "DISPLAY" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
Write the present value into the player if it is 45 or less.
Writing method:
· Press the "PAUSE" button on the remote control unit while pressing the "PAUSE" and "OPEN/CLOSE" buttons on the player.
Do the optical pickup tilt adjustment. (Refer to the section "TILT ADJUSTMENT" in this Guide.)
Use the tilt adjustment check function.
Initialize the player.

8.2. Cautions to Be Used Before Replacing the Optical Pickup Unit and Spindle Motor Assembly

Before replacing the optical pickup unit and spindle motor assembly, check the total using hours for each of them. The checking method is as follows:

	Operating state & Key operation	Display
Using hours of CD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyyyyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of DVD laser	Press "PAUSE", FWD-SKIP" and "5" on the remote control in this order while the unit is stopped	T1_xxxx_yyyyyyyy: total hours are displayed by 4-digit figures (unit: 10 hours).
Using hours of SP motor	Press "PAUSE", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_xxxxxxxx: total hours are displayed by 4-digit figures (unit: 10 hours).
Resetting using hours of CD and DVD lasers (Simultaneous resetting)	Press "PAUSE", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T1_0000_0000
Resetting using hours of the motor	Press "PAUSE", FWD-SKIP" and "6" on the remote control in this order while the unit is stopped	T2_0000

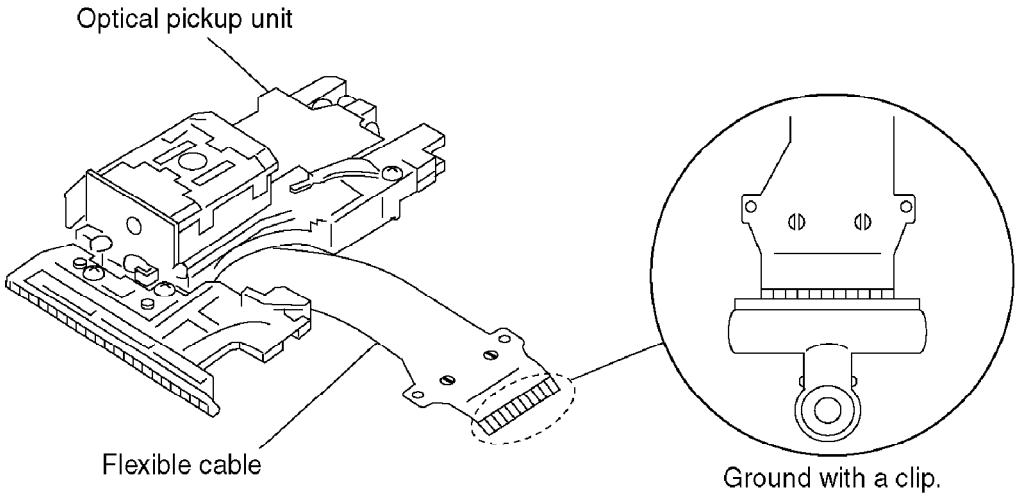
Cautions to be taken when replacing the optical pickup

The optical pickup may break down due to the static electricity of human body. Take proper protection measures against static electricity before repairing the parts around the optical pickup. (See the page describing the PREVENTION OF STATIC ELECTRICITYDISCHARGE.)

1. **Do not touch the areas around the laser diode and actuator.**
2. **Do not judge the laser diode with a tester. (The tester will be damaged easily.)**
3. **It is recommended to use a destaticized soldering iron for short-circuiting or removing the laser diode. (Recommended soldering iron) HAKKO ESD Product**
4. **Solder the land of the flexible cable in the optical pickup.**

Note:

- **When using a soldering iron which is not destaticized, short-circuit the terminal face of the flexible case with a clip. After that, short-circuit the land.**
- **After the repairing work is completed, remove the solder according to the correct procedure shown in this Technical Guide.**



9. SELF-DIAGNOSIS FUNCTION AND SERVICE MODES

9.1. Self-diagnosis Function and Service Modes

Improving the self-diagnosis function
The self-diagnosis funciton in our DVD player currently in use is improved as follows:

Our DVD player currently in use	Our new DVD	
UHF error display The latest error storage function n=1	UHF error display The latest error storage n=20	The storage capacity is incraesed.
Jitter/read error display	Jitter/read error display Focus drive value display	The focus drive current value can be displayed.
Laser drive current display For DVD	Laser drive current display For DVD/CD	
	ADSC internal RAM data display	The servo learning value stored in the RAM data inside the ADSC (servo controller) IC is displayed.
	Servo process display	Mainly in the initial starting operation period of the player, a number is allotted to the servo process of each step, and the process of the starting operation can be displayed.
	Total operation time display SP motor Laser (DVD/CD)	The operation times of SP motor and the laser (both for the DVD and CD) can be displayed.

9.2. Service mode table

Pressing various button combinations on the player and remote control unit can activate the service modes.

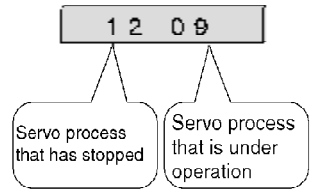
Item	Player mode and button combination	Function	Display	Cancellation method
Jitter check	In PLAY mode, press PAUSE and OPEN buttons on the player, and "5" button on the remote control unit.	Jitter check Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more.	J _xxx_yyy_zz └ Focus drive value └ Read error counter └ Jitter rate └ Jitter check mode Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation.	Press STOP or OPEN button.
Error code check	In ** mode, press PAUSE and OPEN buttons on the player, and "0" button on the remote control unit. * With pointing of cursor up and down on display, the panel controller switches serial number of history and sends out the command accordingly.	Error code check The latest error code stored in EEPROM is displayed.	Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → nn UXX Error code = 0 x DBXX is expressed: → nn HXX Error code = 0 x DXXX is expressed: → nn FXXX Error code = 0 x 0000 is expressed: → nn F--- * "nn" denotes the serial number of history.	Cancelled automatically 5 seconds later.
Initial setting of laser drive current	In STOP mode, press PAUSE and OPEN buttons on the player, and PAUSE button on the remote control unit.	Initial setting of laser drive currentInitial current value for each of DVD laser and CD laser is separately saved in EEPROM.	LDO_034_028 └ CD laser current measurement └ DVD laser current measurement └ Laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and 28mA for DVD laser and CD laser respectively when the laser is witched on.	Cancelled automatically 5 seconds later.
DVD laser drive current measurement	In STOP mode, press PAUSE and OPEN buttons on the player, and DISPLAY button on the remote control unit.	DVD laser drive current measurement ·DVD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDD_034_032 └ Measured current └ Initial current stored in EEPROM └ DVD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 34mA and the measured value is 32mA.	Cancelled automatically 5 seconds later.
ADSC internal RAM data check	In ** mode, press PAUSE and OPEN buttons on the player, and RETURN button on the remote control unit.	ADSC internal RAM data check ·ADSC internal RAM data is read out and displayed. Change the address with CLEAR key operation to show the data for 11 addresses.	A_DFA_6901 └ RAM data for specified address └ Address └ ADSC internal RAM data check mode The value is shown in hexadecimal notation. The above example shows the data in ADSC address DFAh is 6901h.	Press STOP or OPEN button.
Servo process display	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and "7" button on the remote control unit.	Servo process display The servo process from STOP to ACCESS is displayed.	———	Turn off the secondary power.
CD laser drive current measurement	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and DISPLAY button on the remote control unit.	CD laser drive current measurement CD laser drive current is measured and the result is displayed together with the initial value stored in EEPROM. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. (It is also turned off when the primary power is switched off.)	LDC_028_026 └ Measured current └ Initial current stored in EEPROM └ CD laser current measurement mode The value denotes the current in decimal notation. The above example shows the initial current is 28mA and the measured value is 26mA.	———

Item	Player mode and button combination	Function	Display	Cancellation method
Version display	In STOP mode, press PAUSE and OPEN buttons on the player, and "7" button on the remote control unit.	Version display	srrr_xyzzz System controller release number System controller model number System controller generation Panel controller release number Panel controller model number	Cancelled automatically 5 seconds later.
Lighting of display tube	In ** mode, press PAUSE and OPEN buttons on the player, and "9" button on the remote control unit.	Lighitng of display tube	———	Press STOP or OPEN button.
Dealer's lock	In STOP mode, press STOP button on the player, and POWER button on the remote control unit.	Dealer's lock The lock is switched ON or OFF. When dealer's lock is ON, it prohibits switching off of the secondary power and tray opening. When the lock is switched, its ON/OFF status is stored in EEPROM.	· "LOCKED" sign appears when dealer's lock is switched on, or when secondary power key or tray opening key is pressed while the lock is on. ·"UNLOCKED" sign appears when dealer's lock is switched off.	Repeat the same operation.
Initialization	In STOP mode, press PAUSE, BWD-SKIP and OPEN buttons on the player for 3 seconds or longer.	Initialization User settings are cancelled and player is initialized to factory setting.	"INITIALIZED"	
Region display	In STOP mode, press PAUSE and OPEN buttons on the player, and "6" button on the remote control unit.	Region display	x__yy__zzz N: NTSC / 6: PAL60 N: noPAL / P: PAL Region No.	Cancelled automatically 5 seconds later.

Item	Player mode and button combination	Function	Display	Cancellation method
Timer 1 check	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 check Laser operation timerOperation time is measured separately for DVD laser and CD laser.	T1_1234_5678 Shown to the left is DVD laser time, and to the right CD laser time. Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 1 reset	While displaying Timer 1 data, press STOP and FWD-SKIP buttons on the player, and "5" button on the remote control unit.	Timer 1 reset Laser operation timer Operation time of both DVD laser and CD laser is reset all at once.	T1_0000_0000	Cancelled automatically 5 seconds later.
Timer 2 check	In STOP mode, press PAUSE and FWD-SKIP buttons on the player, and "6" button on the remote control unit.	Timer 2 check Spindle motor operation timer	T2_1234 Time is shown in 4 digits of decimal notation in a unit of 10 hours. "0000" will follow "9999".	Cancelled automatically 5 seconds later.
Timer 2 reset	While displaying Timer 2 data, press STOP and FWD-SKIP buttons on the player and "6" button on the remote control unit.	Timer 2 reset Spindle motor operation timer	T2_0000	Cancelled automatically 5 seconds later.

9.3. Servo Process Flow

Specification of the servo process display in the starting flow



(Restrictions)
All processes that are under operati on cannot be displayed due to the limit of the processing time.

Starting flow	Range of the servo process numbers	Processing items	
		Number	Contents of each process
START			
Initial setting	00	00	Each initial setting
Tray control			
TRV initial movement	01	01	TRV initial movement
Disc detection	02～08	02	Initial setting in FE system
		05	Detecting LD ON HALF
		08	Detecting CD LD ON
Disc type distinction	02～08	02	Initial setting in FE system
Focus servo	10～13	12	Focus ON
		13	FBAL adjustment
Tracking servo	14～15	15	Tracking ON
Gain learning	17	17	Gain adjustment in ADSC focus system
ID read	18～1A	19	DBAL/equalizer adjustment
		1A	ID read

9.4. Servo Process Display Mode

In starting operation of the player, a number is allotted to each servo process so that the operation of each step can be seen. The relation between the process and the displayed number are as follows:

Number allotment to the servo process

Process classification	Each processing item	Description	Process number
Initial start process	Initial start	The process starts after the tray is loaded. (The state is changed to "READY" or PREPARE".)	0～40
	Secondary learning	Servos for the DVD-DL 1st layer and the CD-DA double speed are learned in this step.	50～7F
Restart process	Restart	When a user operates in the "READY" state, each servo is turned on.	80～9F
Seek process	Seek	The optical pickup is moved to the disc destination in this process.	A0～BF
Repair process	Recover		
	(Error check)	An error is searched in the PLAY/SEEK state.	C1～C3
	(Attention)	An error is recovered following the attention error interrupt from the S-ODC.	C4～C6
	(Q code read)	If any Q code is improperly read, reset and retry.	C7～C9
Stop process	Stop	A servo is controlled in response to the user's operation to stop the disc completely.	F0～FF

9.5. ADSC Internal Ram Data Display

The servo learning value in the RAM data inside the servo processor ADSC is displayed.
The value is useful for the servo operation/disc quality judge including the OPU.
The concrete contents are shown below:

Address	Contents of display
4B4	Focus gain learning value for DVD-S, DVD-D(L0), CD, and VCD
4BC	Focus gain learning value for DVD-D(L1)
4B6	Focus balance learning value for DVD-S, DVD-D(L0), CD, and VCD
4BE	Focus balance learning value for DVD-D(L1)
4B5	Tracking gain value for DVD-S, DVD-D(L0), CD, and VCD
4BD	Tracking gain value for DVD-D(L1)
TB0	Tracking balance value for DVD-S, DVD-D(L0), CD, VCD
TB1	Tracking balance value for DVD-D(L1)
DBD	DSL offset learning value for DVD-S and DVD-D
DBC	DSL offset learning value for CD and VCD
FC0	Equalizer FC value for DVD-S, DVD-D(L0), CD, and VCD
BT0	Equalizer BOOST value for DVD-S, DVD-D(L0), CD, and VCD
FC1	Equalizer FC value for DVD-D(L1)
BT1	Equalizer BOOST value for DVD-D(L1)

9.6. Sales demonstration lock function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

9.6.1. Setting

The sales demonstration lock is set by simultaneously pressing STOP button on the player and POWER button on the remote control unit.

9.6.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCKED" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

9.7. Service Precautions

9.7.1. Recovery after the dvd player is repaired

When an FROM or an EEPROM in and on the module P.C.B. has replaced, carry out the recovery disc processing to optimize the drive.
Playback the disk above to process the recovery automatically,

Recovery disc (Product number: RFKZD5TR001)

Note:
This unit requires no initialization process carried out after the traditional DVD players were repaired.
When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item of "Initialization" in 8.2 is carried out. Write down the contents of the setting before recovery processing, and reset the player

9.7.2. Firmware version-up of the DVD player

The firmware of the DVD player may be renewed to improve the quality including operationability and playerbility to the substandard discs.processing to optimize the drive.
The version-up disc has also a recovery function so that you don't need use the recovery disc again.

Note:
If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.
In such a case, replace the FROM and carry out the version-up again.
The product number of the version-up disc will be noticed when it is supplied.

9.8. Handling After Completing Repairs

Use the following procedure after completing repairs.

9.8.1. Method

Confirm that the power is turned on:

1. Press the "OPEN/CLOSE" button to close the tray.

2. Press the "POWER" button to turn off the power.

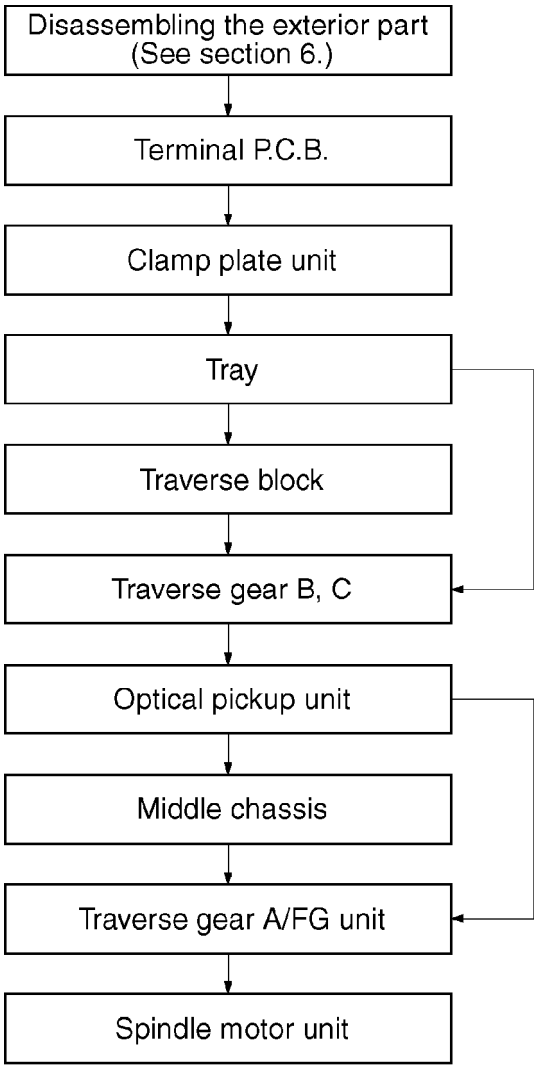
3. Disconnect the power plug from the outlet.

9.8.2. Precautions

Do not disconnect the power plug from the outlet with the tray still open, then close the tray manually.

10. ASSEMBLING AND DISASSEMBLING THE MECHANISM UNIT

10.1. Disassembly Procedure

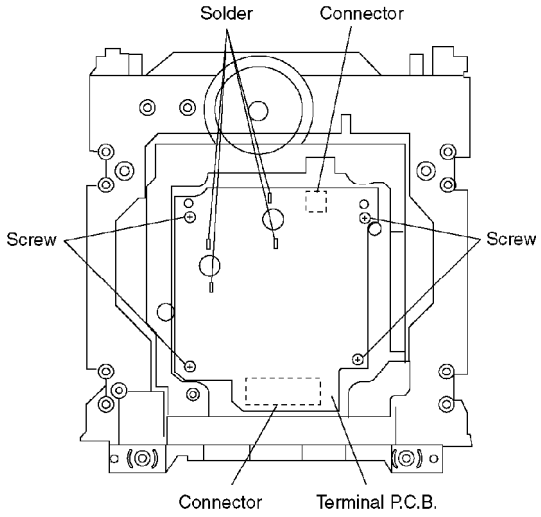


10.2. Terminal P.C.B.

1. Unscrew the screws.

2. Remove the solders.

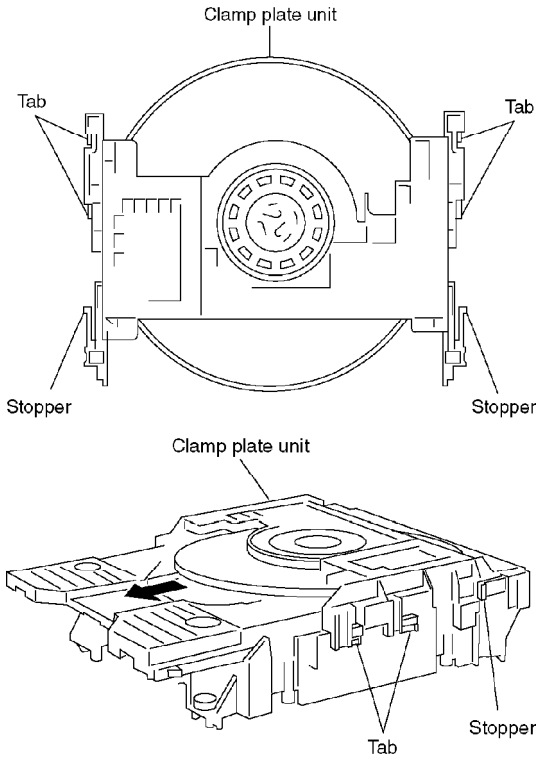
3. Remove the connectors.



<Mechanism unit bottom>

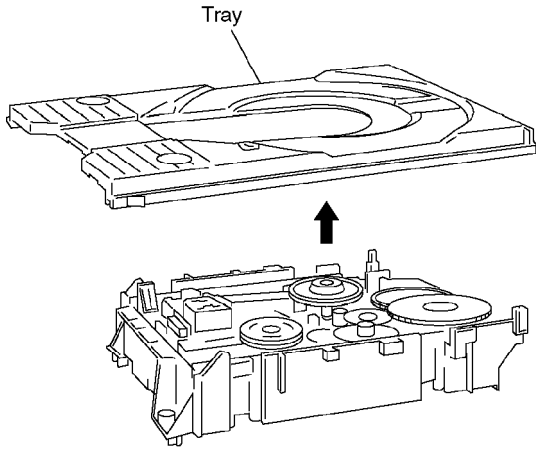
10.3. Clamp Plate Unit

1. Spread the stopper with hand to slide the tabs and remove the clamp plate unit.



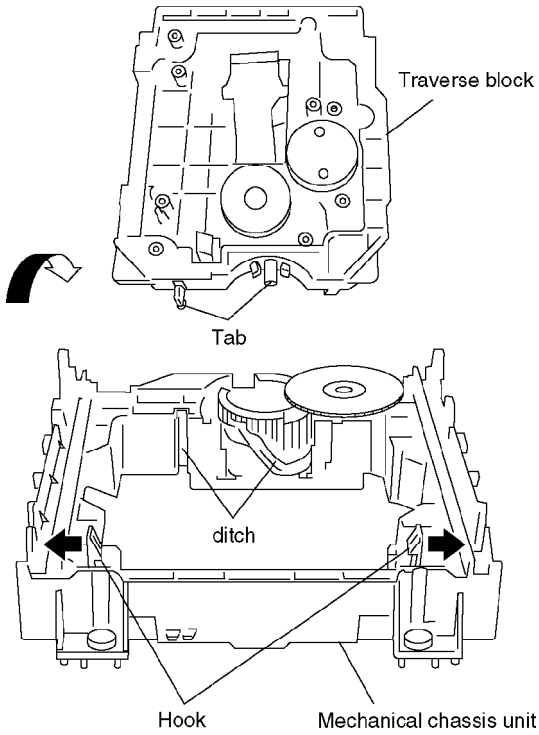
10.4. Tray

1. Lift the tray.



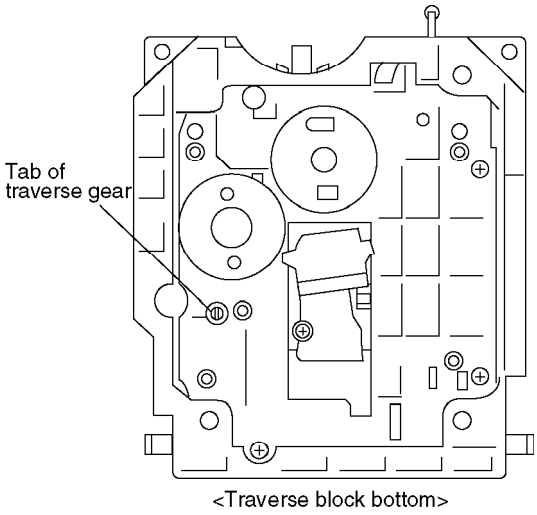
10.5. Traverse Block

1. Lift the traverse block while spreading the hook of the mechanical chassis unit.
2. Disengage the tabs from the holes of the mechanical chassis unit.

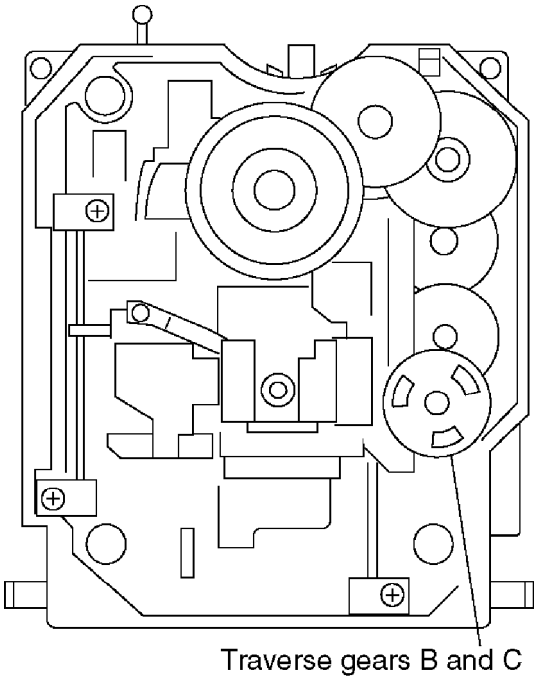


10.6. Traverse Gear

1. Disengage the tabs from the traverse gear.
2. Remove the traverse gears B and C.



<Traverse block bottom>

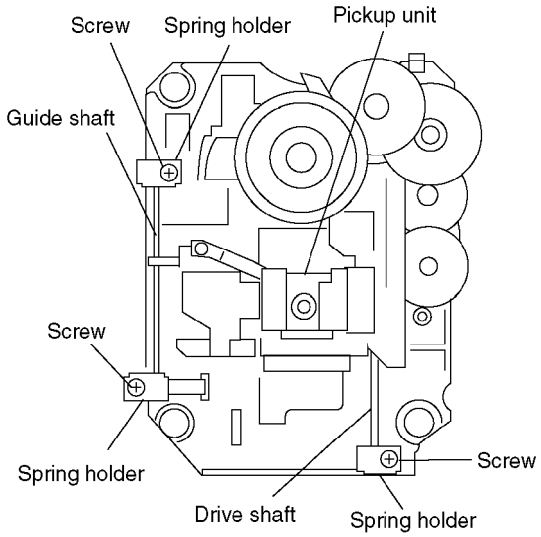


10.7. Optical Pickup Unit

1. Unscrew the screws.

2. Remove the spring holders and the springs.

3. Pull out the drive shaft and guide shaft.



10.7.1. Precautions in optical pickup replacement

The optical pickup can be damaged by static electricity from you body. Be sure to take static electricity countermeasures when working around the optical pickup. (Refer to the related page in this Manual about the countermeasures.)

1. Do not touch laser diode, actuator and their peripheries.

2. Do not use tester to check laser diode. (Laser diode can be damaged easily.)

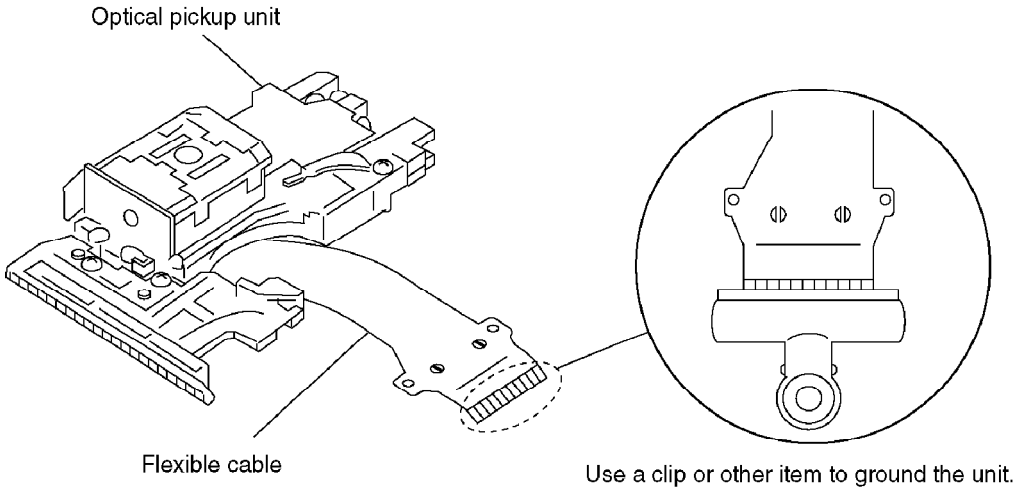
3. The use of soldering iron with anti-static feature is recommended when providing short-circuit to laser diode or when removing it.

4. Solder the land on flexible cable of optical pickup unit.

Caution

- When using the soldering iron without anti-static feature, short-circuit the flexible cable terminal with a clip before short-circuiting the land.

- After intended repair is finished, remove the solder for short-circuit of laser diode in a correct way following the procedures described in this Manual.

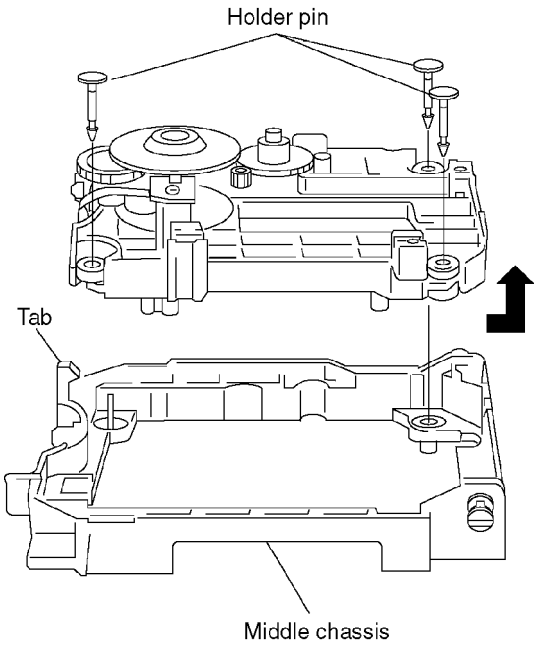


10.8. Disassembling the Middle Chassis

1. Remove the holder pins.

2. Remove the tab.

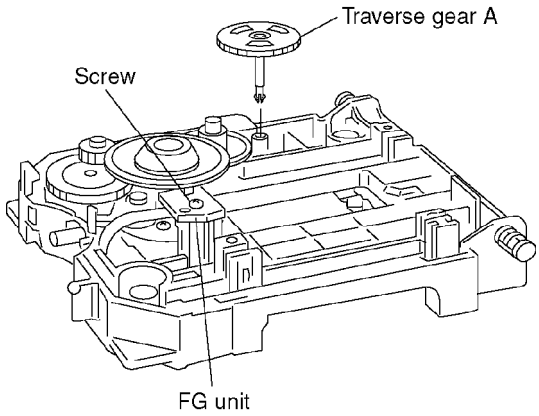
3. It lifts while pulling it in the direction of the arrow.



10.9. Disassembling the Traverse Gear A/FG unit

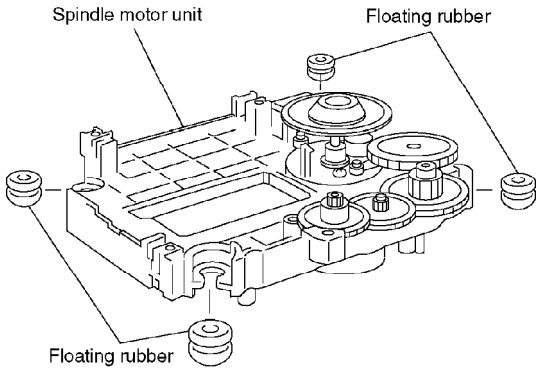
1. Unscrew the screw.

2. Remove the traverse gear A.



10.10. Disassembling the Spindle Motor Unit

1. Remove the floating rubbers.



11. ADJUSTMENT PROCEDURES

11.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	JGS0098
	Extension cable (module P.C.B. to mother P.C.B.)	JFKZ0098
	Extension cable (module P.C.B. to mother P.C.B.)	RFKZ0097
	Extension cable (module P.C.B. to mother P.C.B.)	VUC8026
Others	Screw lock	RZZ0L01
	Grease	RFKXGAK152
	Oil	RFKXGA1280, JZS0648
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc

11.2. Important points in adjustment

11.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.

- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit

2. Spindle motor unit

3. Optical pickup peripheral parts (such as rail)

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment isgenerally unnecessary after replacing the traverse unit.

11.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this Manual.

11.3. Storing and Handling Test Discs

- Surface precision is vital for DVD test discs. Be sure to store and

handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.
2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

11.4. Optical adjustment

11.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T43 (outer periphery) play	DVDR-S15 or DVD
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

11.4.1.1. Adjustment procedure

1. While pressing PAUSE and OPEN/CLOSE buttons on the main unit, press "5" on the remote control unit.
2. Confirm that "J_xxx_yyy_zz" is shown on the front display.

For your information:
"yyy" and "zz" shown to the right have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

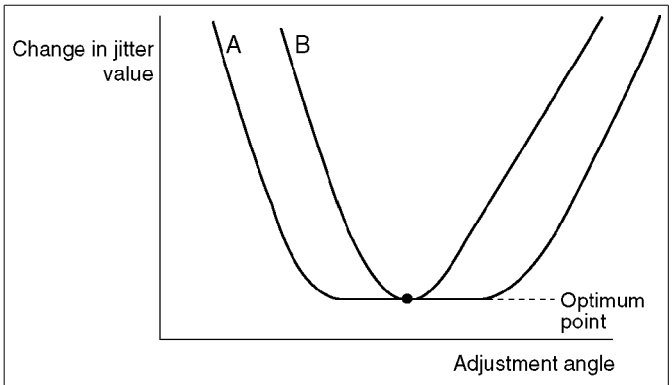
Note:
Jitter value appears on the front display.

3. Play test disc T01 (inner periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.

5. Play test disc T43 (outer periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T43 (outer periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

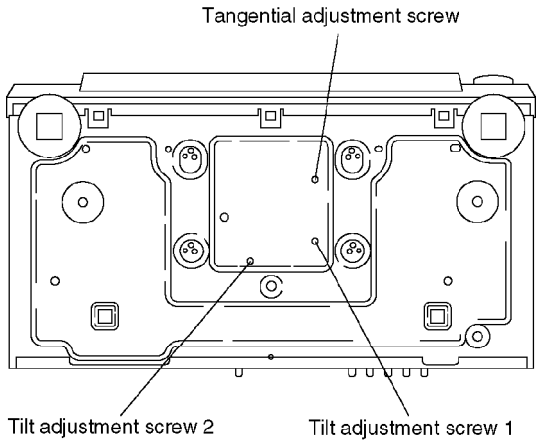
11.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.

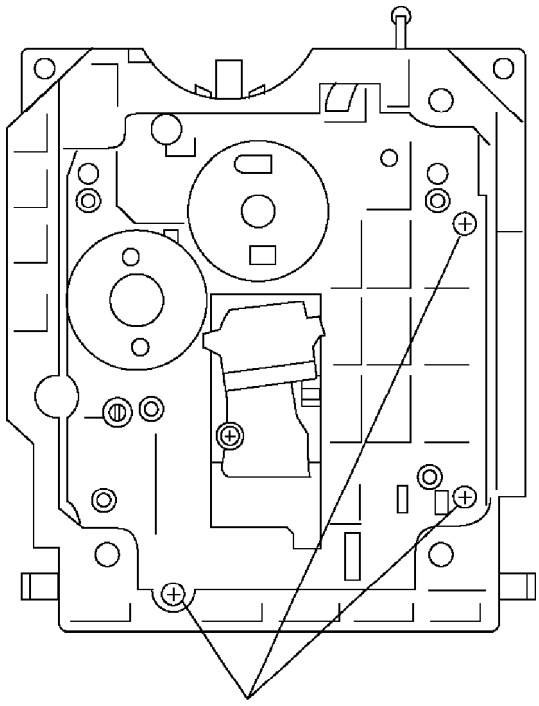


11.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

11.4.1.4. Procedure for screw lock

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



12. Electrical Adjustment

Do this confirmation after replacing a P.C.B.

12.1. Video Output (Luminace Signal) Adjustment

Do this confirmation after replacing a P.C.B.

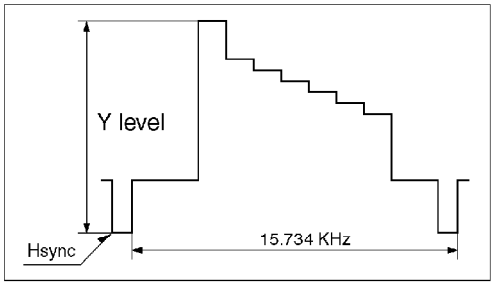
Measurement point	Mode	Disc
S-video output terminal (Y OUT)	PLAY	DTDT-S20 (Title 11) Color bar 100%
Measuring equipment, tools	Adjustment value	Adjustment point
Screwdriver, Oscilloscope 200mV/div10 ⁄⁄ sec/div	1000mVp-p±20mV	VR3225

Purpose: To maintain video signal output compatibility.

1. Connect the oscilloscope to the S-video output terminate at 75

ohms.

2. Adjust the VR3225 so that the Y level is 1000 mVp-p ± 20 mV.

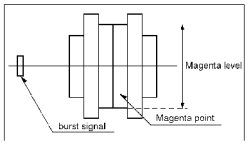


12.2. Video Output (Chrominance Signal) Adjustment

Measurement point	Mode	Disc
S-Video output terminal (C OUT)	PLAY	DVDT-S20 (Title 11) Color bar 100%
Measuring equipment, tools	Adjustment value	Adjustment point
Screwdriver,Oscilloscope 200mV/div10 ⫽ sec/div	779 mVp-p±40 mV	VR3221

Purpose: To maintain video signal output compatibility.

1. Connect the oscilloscope to the S-video output terminate at 75 ohms.
2. Adjustment the VR3221 so that the Magenta level is 779 mVp-p ± 40 mV.



12.3. Prograssive Output Adjustment

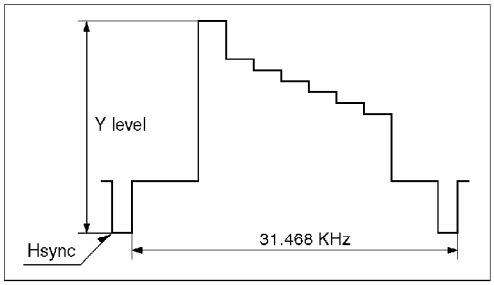
Measurement point	Mode	Disc
JK3591	PLAY	DVDT-S20 (Title 11) Color bar 100%
Measuring equipment, tools	Adjustment value	Adjustment point
Screwdriver,Oscilloscope 200mV/div10 ⫽ sec/div	1000 mVp-p±20 mV	VR3751

Purpose : To maintain video signal output compatibility.

1. Connect the oscilloscope to the JK3591 terminate at 75 ohms.
2. Connect the JK3591 to the RGB Encorder.

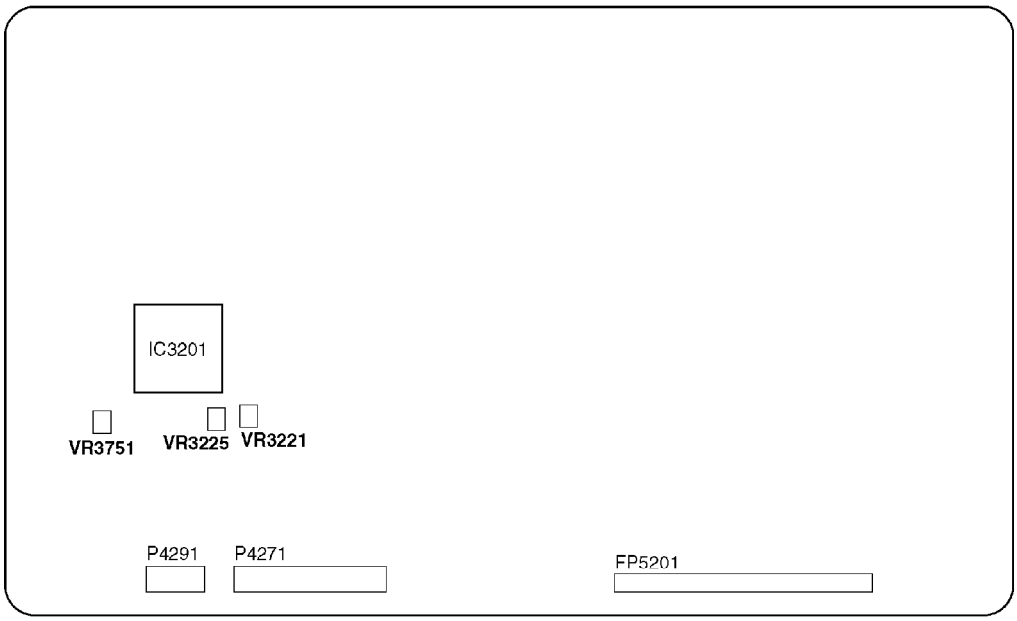
3. “525P OUTPUT” Botton is push. / Main body is “PROGBASSIVE OUTPUT MODE”.

4. Adjust the VR3751 so that Y level is 1000 mVp-p ± 20 mV.



12.4. Position of Adjustment Volume

MODULE P.C.B. (COMPONENT SIDE)



13. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMPOUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCKSELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIPSELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT

INITIAL/LOGO		ABBREVIATIONS
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATAOUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/ 40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INITIAL/LOGO		ABBREVIATIONS
I	IECOUT	IEC958 FORMAT DATA
	IPFRAG	OUTPUT
	IREF	INTERPOLATION FLAG
	ISEL	I (CURRENT) REFERENCE
		INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION
		CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND
	MDATA	CLOCK
	MDQ0~UP	MEMORY SERIAL COMMAND
	MDQM	DATA
	MLD	MEMORY DATA INPUT/OUTPUT
	MPEG	MEMORY DATA I/O MASK
		MEMORYSERIAL COMMAND
		LOAD
		MOVING PICTURE EXPERTS
		GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE
	PCK	DIFFERENCE
	PDVD	PLL CLOCK
	PEAK	DVD TRACKING PHASE
	PLLCLK /	DIFFERENCE
	PLLOK	CAP. FOR PEAK HOLD
	PWMCTL	CHANNEL PLL CLOCK
	PWMDA	PLL LOCK
	PWMOA, B	PWM OUTPUT CONTROL
		PULSE WAVE MOTOR DRIVEA
		PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE
	RS	OUTPUT
	RSEL	(CD-ROM) REGISTER SELECT
	RST	RF POLARITY SELECT
	RSV	RESET
		RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK
	SCL	RECEIVER
	SCLK	SERIAL CLOCK
	SDA	SERIAL CLOCK
	SEG0~UP	SERIAL DATA
	SELCLK	FL SEGMENT OUTPUT
	SEN	SELECTCLOCK
	SIN1, 2	SERIAL PORT ENABLE
	SOUT1, 2	SERIAL DATA IN
	SPDI	SERIAL DATA OUT
	SPDO	SERIAL PORT DATA INPUT
	SPEN	SERIAL PORT DATA OUTPUT
	SPRCLK	SERIAL PORT R/W ENABLE
	SPWCLK	SERIAL PORT READ CLOCK
	SQCK	SERIAL PORT WRITE CLOCK
	SQCX	SUB CODE Q CLOCK
	SRDATA	SUBCODE Q DATA READ
	SRMADR	CLOCK
	SRMDT0~7	SERIAL DATA
	SS	SRAM ADDRESS BUS
	STAT	SRAM DATA BUS 0~7
	STCLK	START/STOP
	STD0~UP	STATUS
	STENABLE	STREAM DATA CLOCK
	STSEL	STREAM DATA
	STVALID	STREAM DATA INPUT ENABLE
	SUBC	STREAM DATA POLARITY
	SBCK	SELECT
	SUBQ	STREAM DATAVALIDITY
	SYSCLK	SUB CODE SERIAL
		SUB CODE CLOCK
		SUB CODE Q DATA

		SUB CODE Q DATA
		SYSTEM CLOCK

INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY
	VCDCONT	VOLTAGE
	VDD	VIDEO CD CONTROL
	VFB	(TRACKING
	VREF	BALANCE)
	VSS	DRAIN POWER SUPPLY
		VOLTAGE
		VIDEO FEED BACK
		VOLTAGE REFERENCE
		SOURCE POWER
		SUPPLYVOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER

INITIAL/LOGO		ABBREVIATIONS
X	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS
	XVSYNCO	STROBE X VERTICAL SYNC OUTPUT

14. Voltage Chart

14.1. Power Supply P.C.B.

14.2. Module P.C.B.

14.3. Mother P.C.B.

14.4. Front 2 P.C.B. and Front 3 P.C.B.

15. BLOCK DIAGRAM

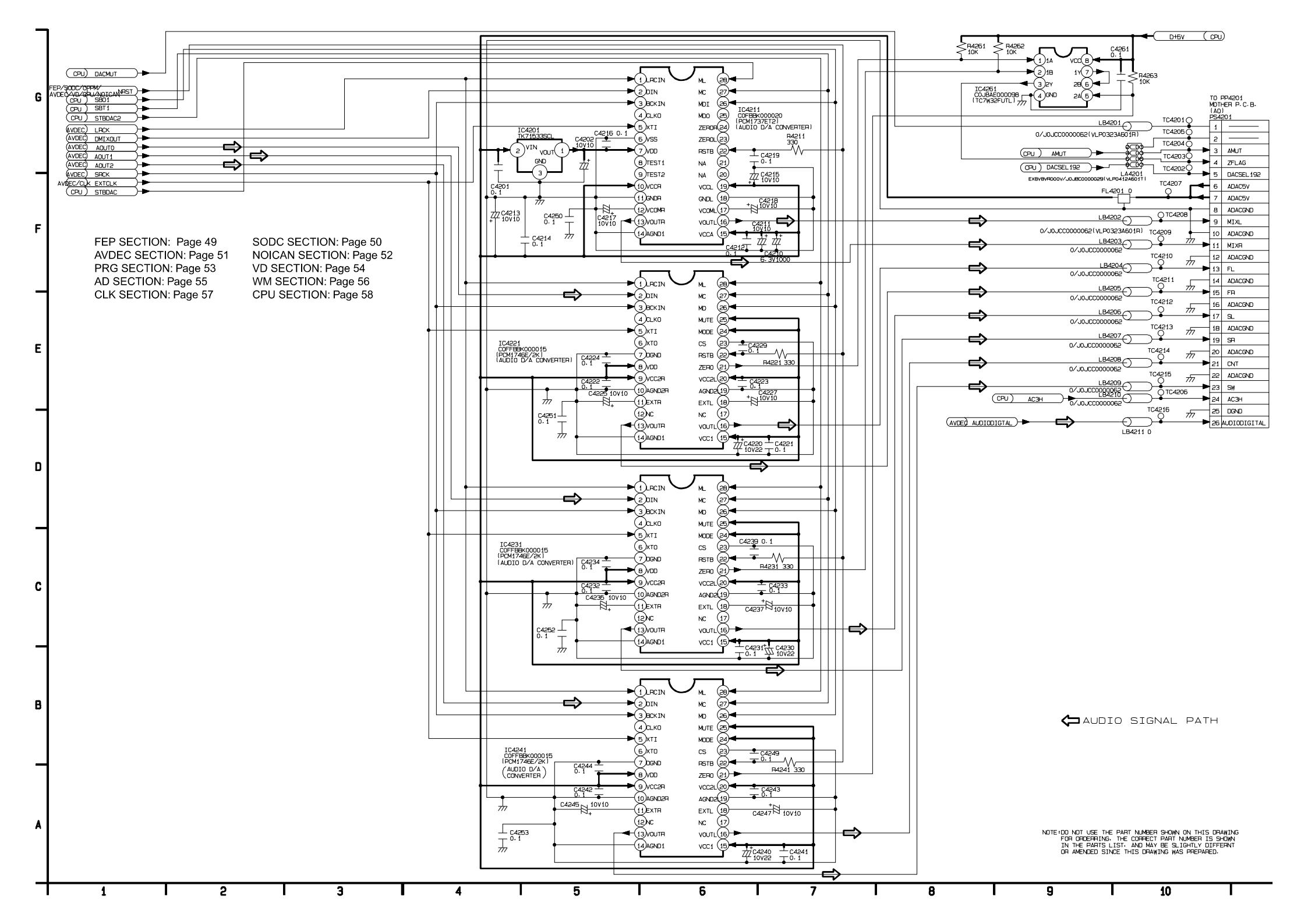
15.1. OVERALL BLOCK DIAGRAM

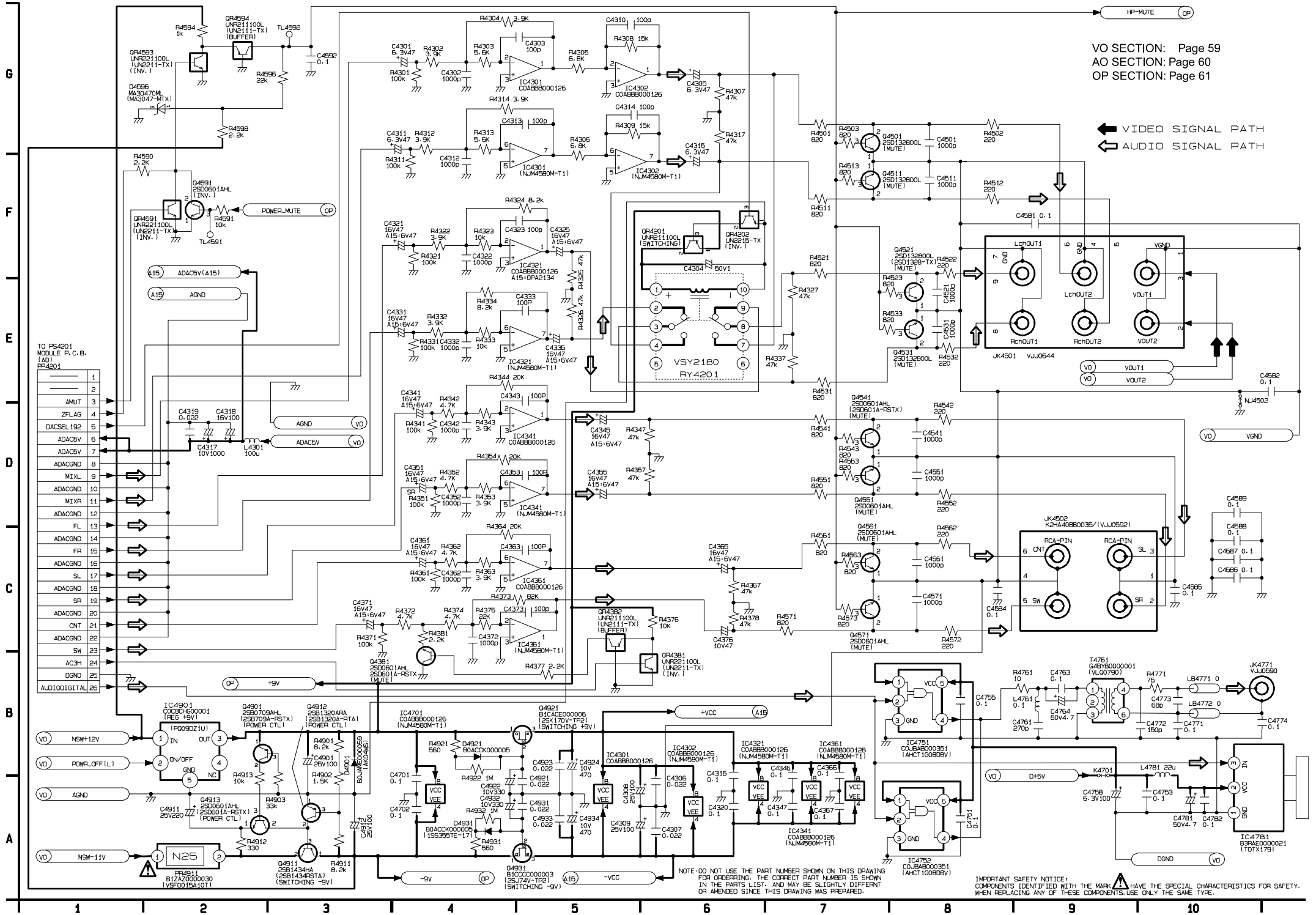
15.2. SERVO BLOCK DIAGRAM

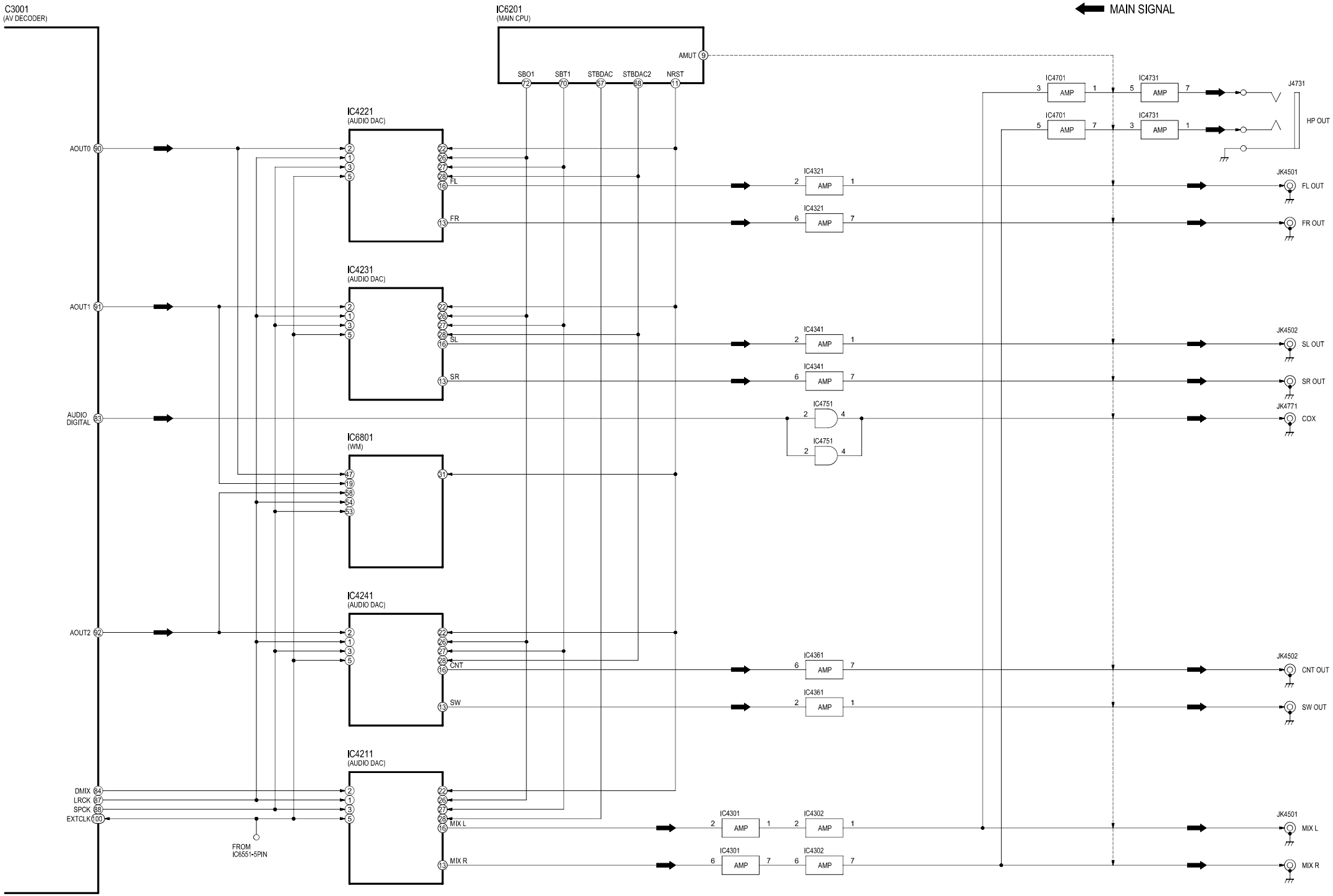
15.3. VIDEO BLOCK DIAGRAM

15.4. AUDIO BLOCK DIAGRAM

16. SCHEMATIC DIAGRAM


FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58
AUDIO SIGNAL PATH
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


VO SECTION: Page 59
AO SECTION: Page 60
OP SECTION: Page 61
VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
HP-MUTE
POWER_MUTE
TO PS4201 MODULE P.C.B. (AD) PP4201
AMUT
ZFLAG
DACSEL192
ADAC5V
ADACGND
MIXL
MIXR
FL
FR
SL
SR
CNT
SW
AC3H
DGND
AUDIODIGITAL
ADAC5V(A15)
AGND
+9V
-9V
+VCC
-VCC
NSW+12V
POWR_OFF(L)
NSW-11V
D+5V
VSY2180
RY4201
JK4501 VJJ0644
JK4502 K2HA40BB0035/(VJJ0592)
JK4771 VJJ0590
IC4901 C0CBCHG00001 (REG +9V)
IC4701 C0ABBB000126 (NJM4580M-T1)
IC4302 C0ABBB000126 (NJM4580M-T1)
IC4301 C0ABBB000126 (NJM4580M-T1)
IC4321 C0ABBB000126 (NJM4580M-T1)
IC4341 C0ABBB000126 (NJM4580M-T1)
IC4361 C0ABBB000126 (NJM4580M-T1)
IC4751 C0JBAB000351 (AHCT1G08DBV)
IC4752 C0JBAB000351 (AHCT1G08DBV)
IC4781 B3RAE0000021 (TOTX179)
PR4911 B12ZA0000030 (VSFC015A10T)
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SAME TYPE.


C3001
(AV DECODER)
IC6201
(MAIN CPU)
MAIN SIGNAL
AMUT 9
SBO1 72
SBT1 70
STBDAC 57
STBDAC2 68
NRST 11
IC4221
(AUDIO DAC)
IC4231
(AUDIO DAC)
IC6801
(WM)
IC4241
(AUDIO DAC)
IC4211
(AUDIO DAC)
AOUT0 90
AOUT1 91
AOUT2 92
AUDIO DIGITAL 83
DMIX 84
LRCK 87
SPCK 88
EXTCLK 100
FROM IC6551-5PIN
FL
FR
SL
SR
CNT
SW
MIX L
MIX R
IC4321
IC4341
IC4361
IC4301
IC4302
IC4701
IC4731
IC4751
AMP
J4731
HP OUT
JK4501
FL OUT
FR OUT
JK4502
SL OUT
SR OUT
JK4771
COX
CNT OUT
SW OUT
MIX L
MIX R

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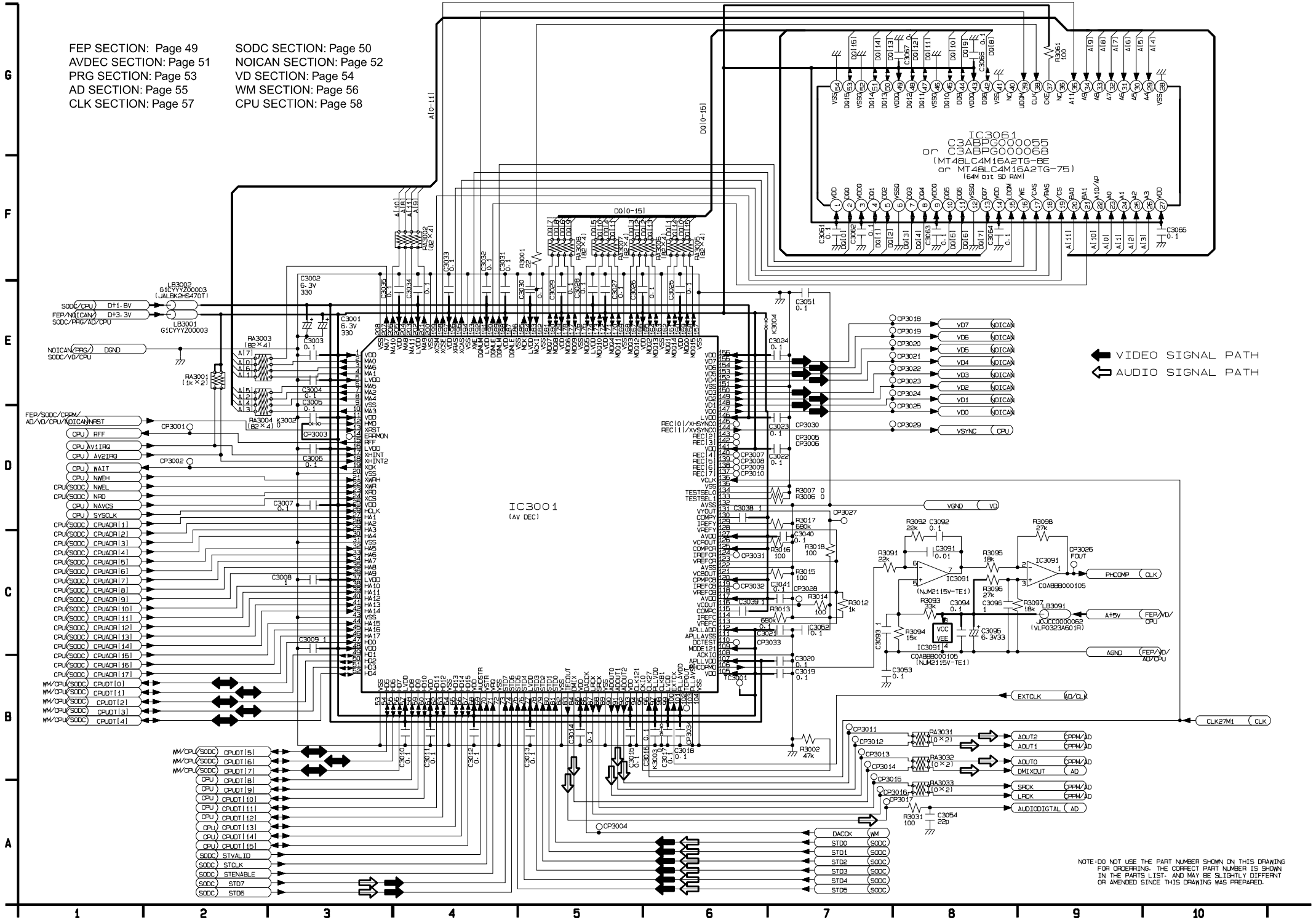
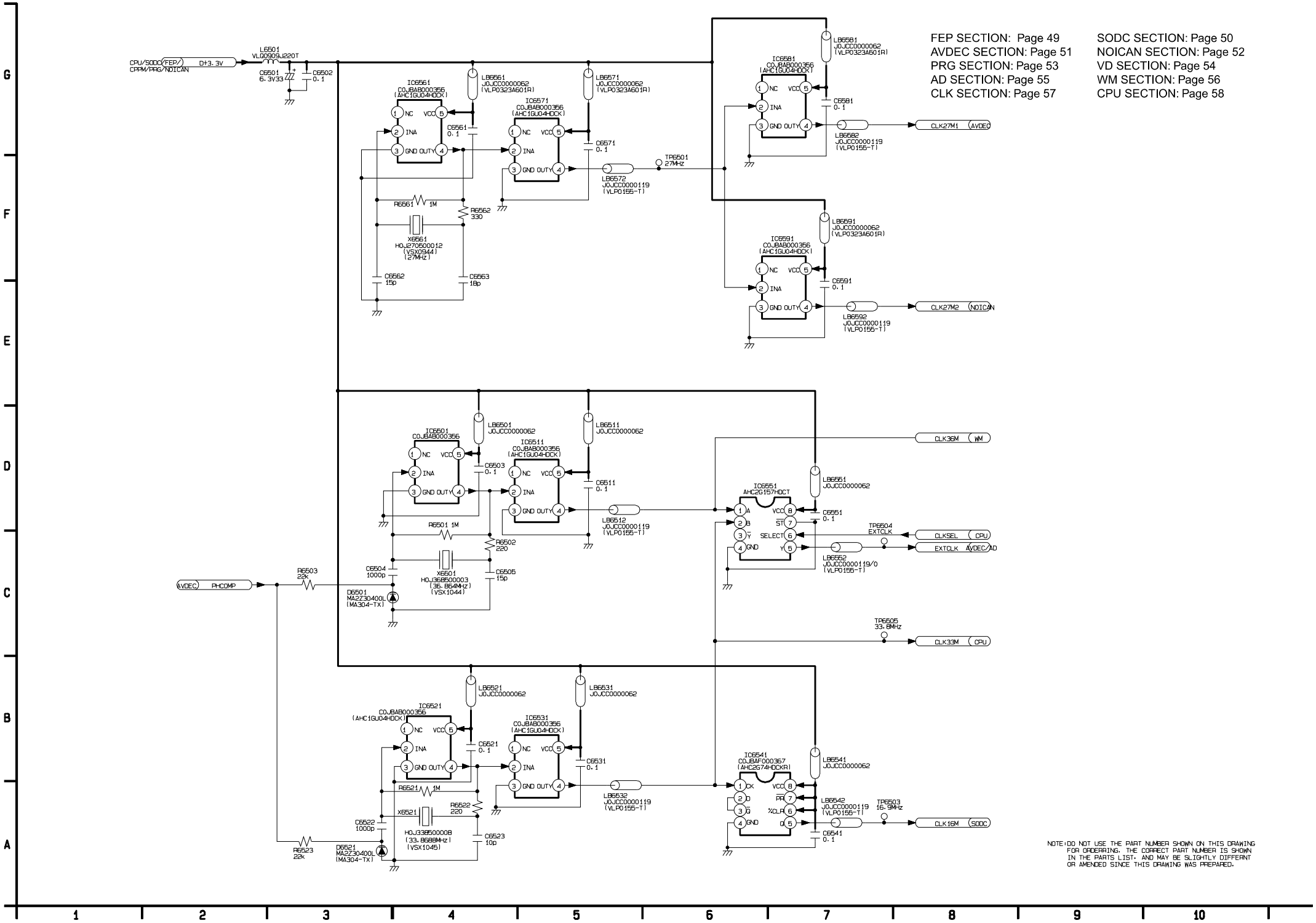
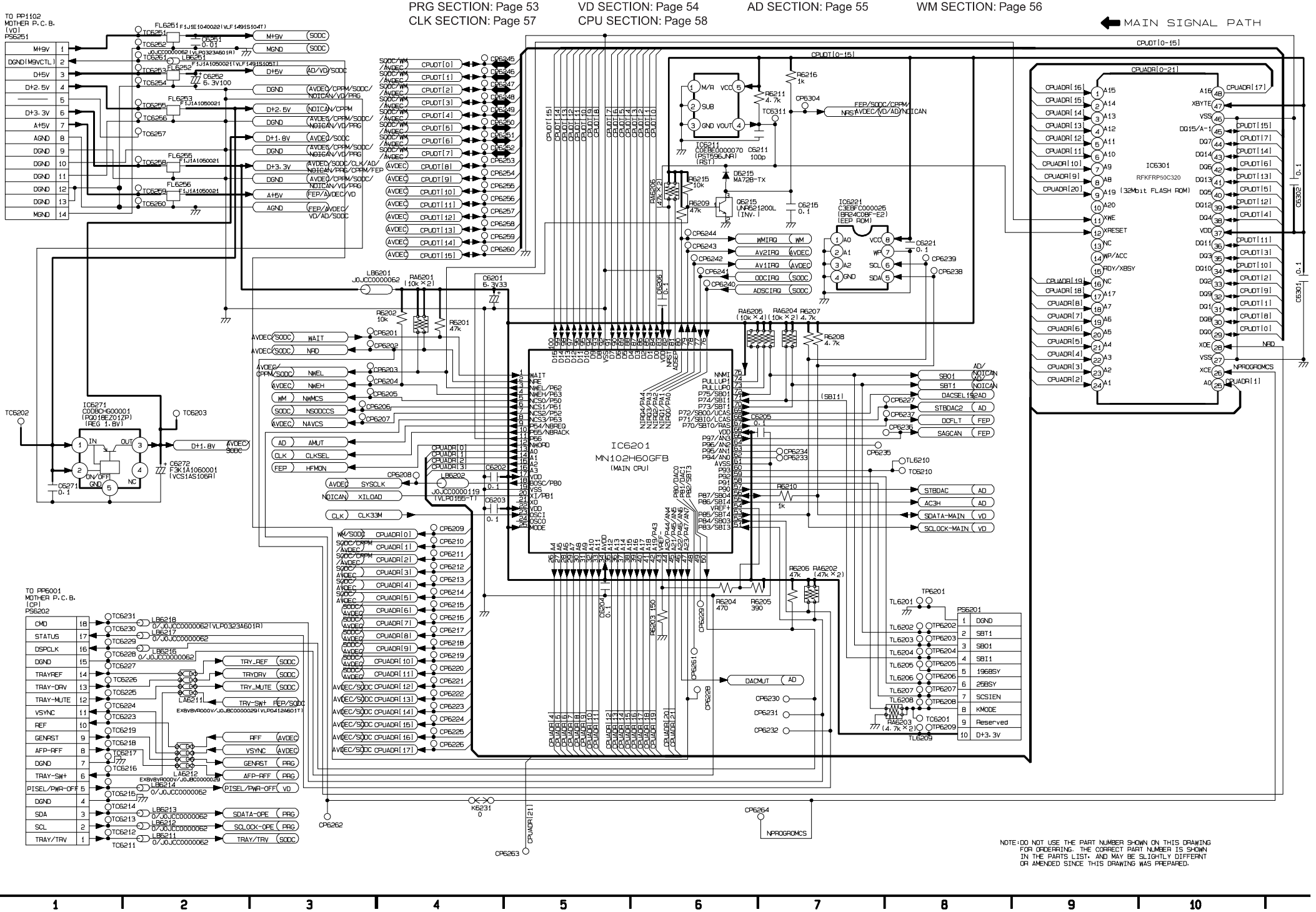
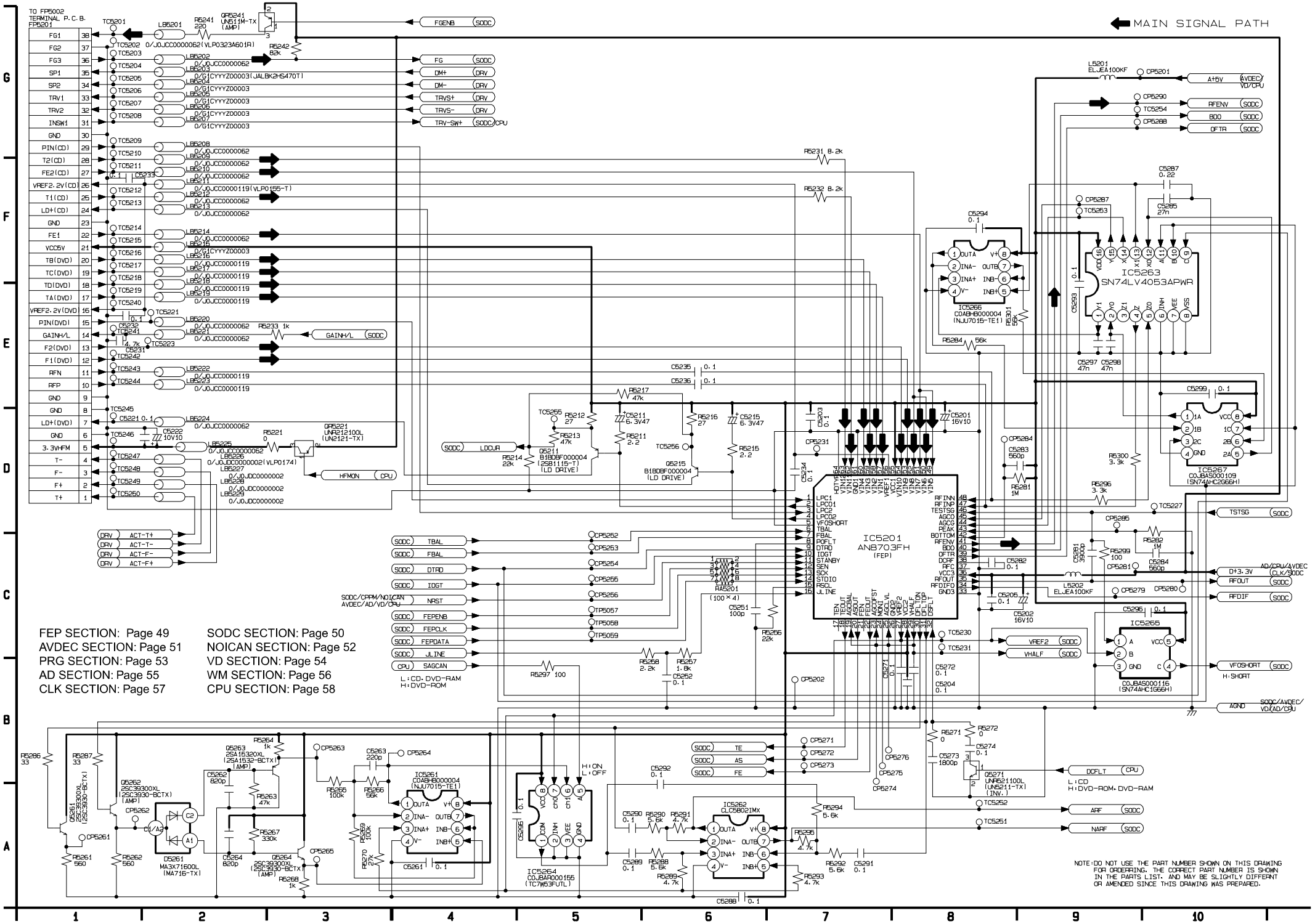



FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58
CPU/SODC/FEP/CPPM/PRG/NOICAN
D+3.3V
L6501
VLQ0909J220T
C6501 6.3V33
C6502 0.1
IC6561 COJBAB000356 (AHC1GU04HDCK)
LB6561 JOJCC0000062 (VLP0323A601R)
C6561 0.1
IC6571 COJBAB000356 (AHC1GU04HDCK)
LB6571 JOJCC0000062 (VLP0323A601R)
C6571 0.1
TP6501 27MHz
LB6572 JOJCC0000119 (VLP0155-T)
R6561 1M
R6562 330
X6561 HOJ270500012 (VSX0944) (27MHz)
C6562 15p
C6563 18p
IC6581 COJBAB000356 (AHC1GU04HDCK)
LB6581 JOJCC0000062 (VLP0323A601R)
C6581 0.1
LB6582 JOJCC0000119 (VLP0155-T)
CLK27M1 (AVDEC)
IC6591 COJBAB000356 (AHC1GU04HDCK)
LB6591 JOJCC0000062 (VLP0323A601R)
C6591 0.1
LB6592 JOJCC0000119 (VLP0155-T)
CLK27M2 (NOICAN)
IC6501 COJBAB000356
LB6501 JOJCC0000062
C6503 0.1
IC6511 COJBAB000356 (AHC1GU04HDCK)
LB6511 JOJCC0000062
C6511 0.1
LB6512 JOJCC0000119 (VLP0155-T)
R6501 1M
R6502 220
X6501 HOJ368500003 (36.864MHz) (VSX1044)
C6504 1000p
C6505 15p
AVDEC PHCOMP
R6503 22k
D6501 MA2Z30400L (MA304-TX)
CLK36M (WM)
IC6551 AHC2G157HDCT
LB6551 JOJCC0000062
C6551 0.1
TP6504 EXTCLK
CLKSEL (CPU)
EXTCLK (AVDEC/AD)
LB6552 JOJCC0000119/0 (VLP0155-T)
TP6505 33.8MHz
CLK33M (CPU)
IC6521 COJBAB000356 (AHC1GU04HDCK)
LB6521 JOJCC0000062
C6521 0.1
IC6531 COJBAB000356 (AHC1GU04HDCK)
LB6531 JOJCC0000062
C6531 0.1
LB6532 JOJCC0000119 (VLP0155-T)
R6521 1M
R6522 220
X6521 HOJ338500008 (33.8688MHz) (VSX1045)
C6522 1000p
C6523 10p
R6523 22k
D6521 MA2Z30400L (MA304-TX)
IC6541 COJBAF000367 (AHC2G74HDCKR)
LB6541 JOJCC0000062
LB6542 JOJCC0000119 (VLP0155-T)
TP6503 16.9MHz
CLK16M (SODC)
C6541 0.1
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

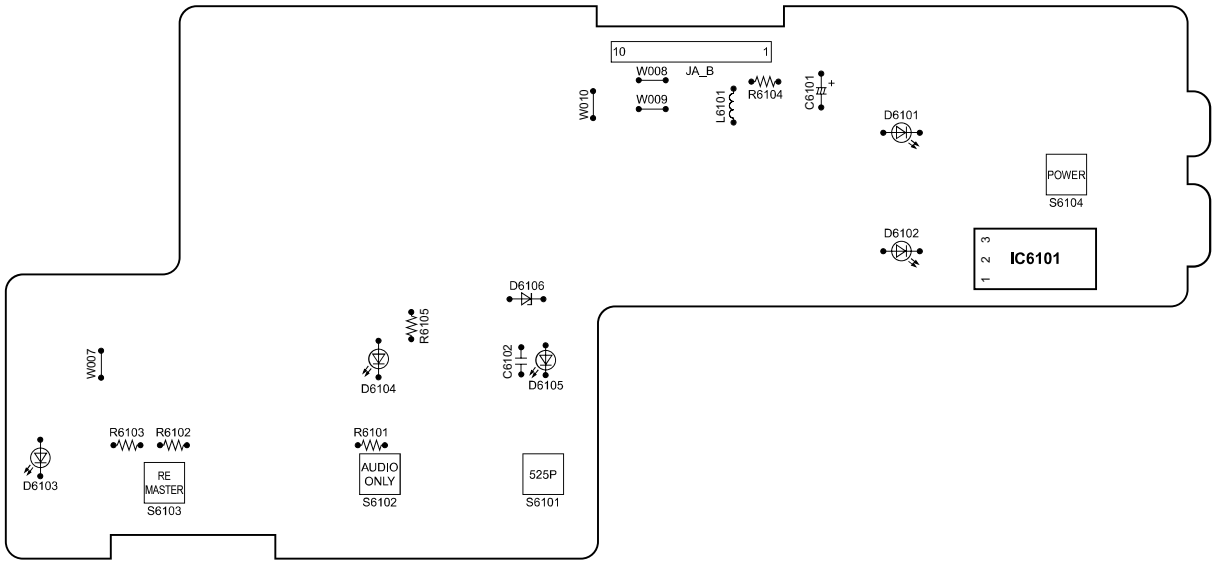
FEP SECTION: Page 49
PRG SECTION: Page 53
CLK SECTION: Page 57
SODC SECTION: Page 50
VD SECTION: Page 54
CPU SECTION: Page 58
AVDEC SECTION: Page 51
AD SECTION: Page 55
NOICAN SECTION: Page 52
WM SECTION: Page 56

MAIN SIGNAL PATH

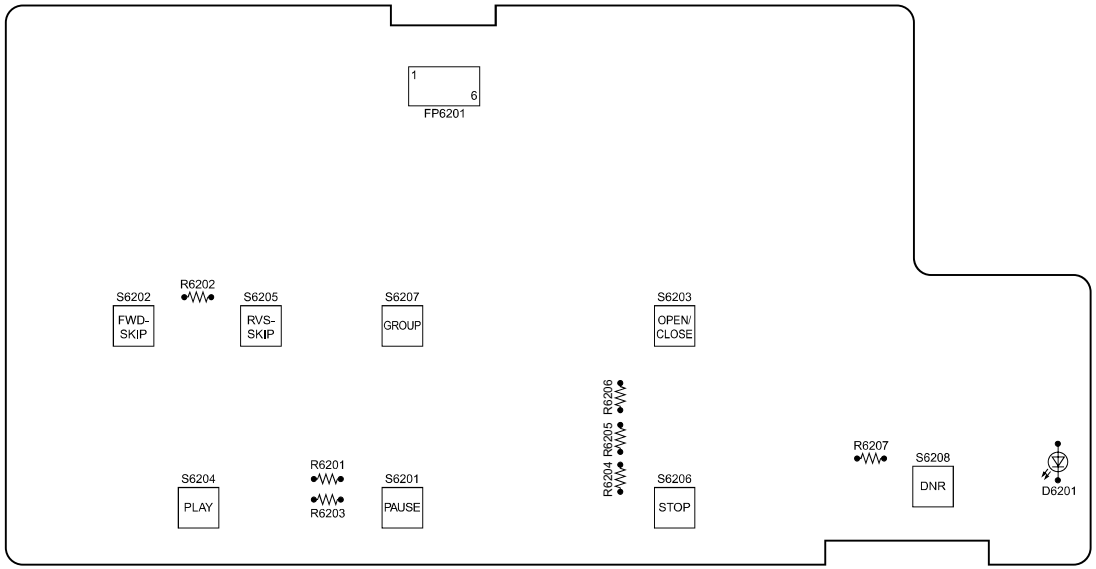



MAIN SIGNAL PATH
TO FP5002 TERMINAL P.C.B. FP5201
FG1 38
FG2 37
FG3 36
SP1 35
SP2 34
TRV1 33
TRV2 32
INSW1 31
GND 30
PIN(CD) 29
T2(CD) 28
FE2(CD) 27
VREF2.2V(CD) 26
T1(CD) 25
LD+(CD) 24
GND 23
FE1 22
VCC5V 21
TB(DVD) 20
TC(DVD) 19
TD(DVD) 18
TA(DVD) 17
VREF2.2V(DVD) 16
PIN(DVD) 15
GAINH/L 14
F2(DVD) 13
F1(DVD) 12
RFN 11
RFP 10
GND 9
GND 8
LD+(DVD) 7
GND 6
3.3VHFM 5
T- 4
F- 3
F+ 2
T+ 1
FGENB SODC
FG SODC
DM+ DRV
DM- DRV
TRVS+ DRV
TRVS- DRV
TRV-SW+ SODC/CPU
GAINH/L SODC
HFMON CPU
DRV ACT-T+
DRV ACT-T-
DRV ACT-F-
DRV ACT-F+
LDCUR SODC
SODC TBAL
SODC FBAL
SODC DTRD
SODC IDGT
SODC/CPPM/NOICAN NAST
AVDEC/AD/VD/CPU
SODC FEPENB
SODC FEPCLK
SODC FEPDATA
SODC JLINE
CPU SAGCAN
L:CD-DVD-RAM
H:DVD-ROM
SODC TE
SODC AS
SODC FE
H:ON
L:OFF
IC5201
AN8703FH
(FEP)
IC5263
SN74LV4053APWR
IC5267
COJBAS000109
(SN74AHC2666H)
IC5265
COJBAS000116
(SN74AHC1666H)
IC5266
COABHB000004
(NJU7015-TE1)
IC5261
COABHB000004
(NJU7015-TE1)
IC5262
CLC5802IMx
IC5264
COJBAR000155
(TC7W53FUTL)
A+5V AVDEC/VD/CPU
RFENV SODC
BDO SODC
OFTR SODC
TSTSG SODC
D+3.3V AD/CPU/AVDEC (CLK/SODC
RFOUT SODC
RFDIF SODC
VREF2 SODC
VHALF SODC
VFOSHORT SODC
H:SHORT
AGND SODC/AVDEC/VD/AD/CPU
DCFLT CPU
L:CD
H:DVD-ROM, DVD-RAM
ARF SODC
NARF SODC
FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

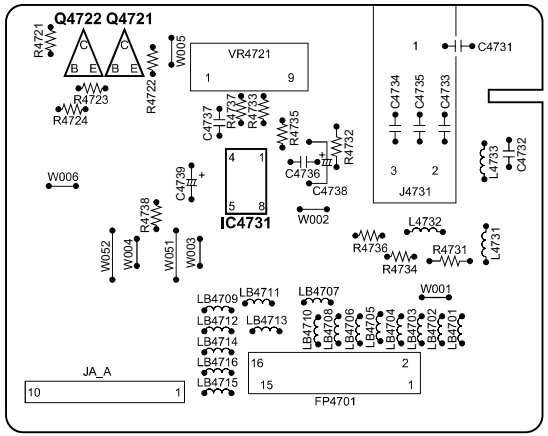
FRONT2 P.C.B.

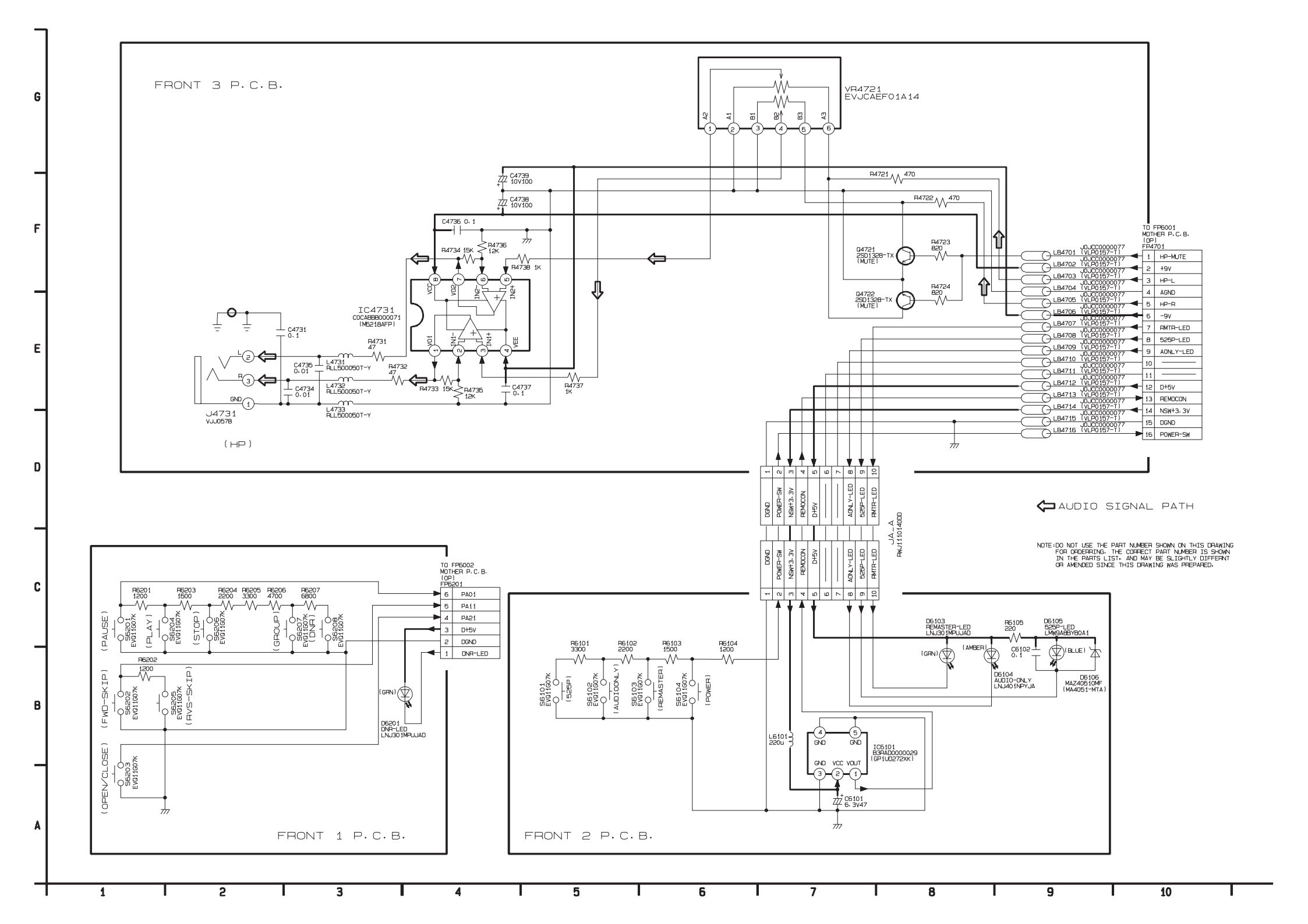


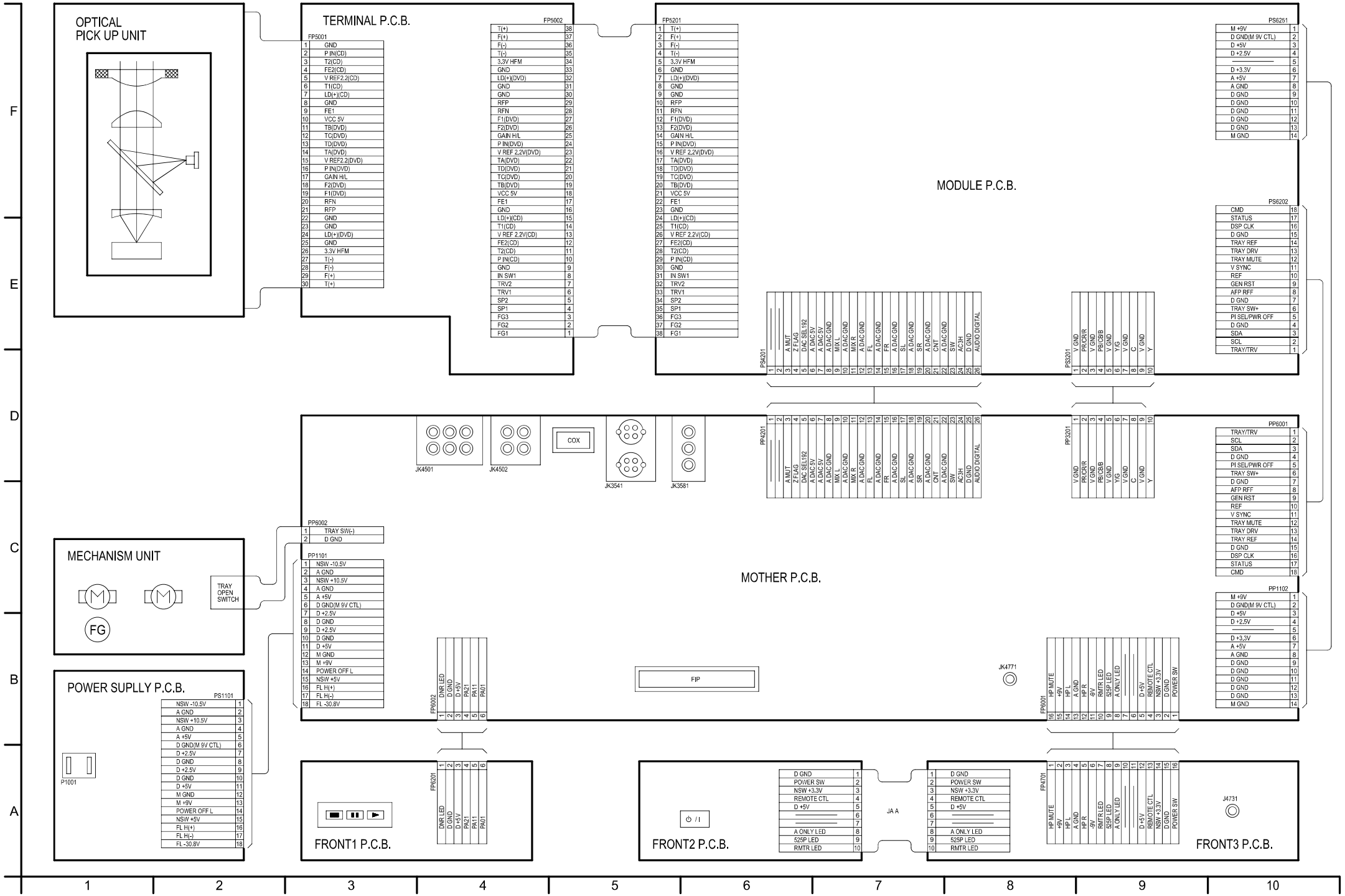
FRONT1 P.C.B.



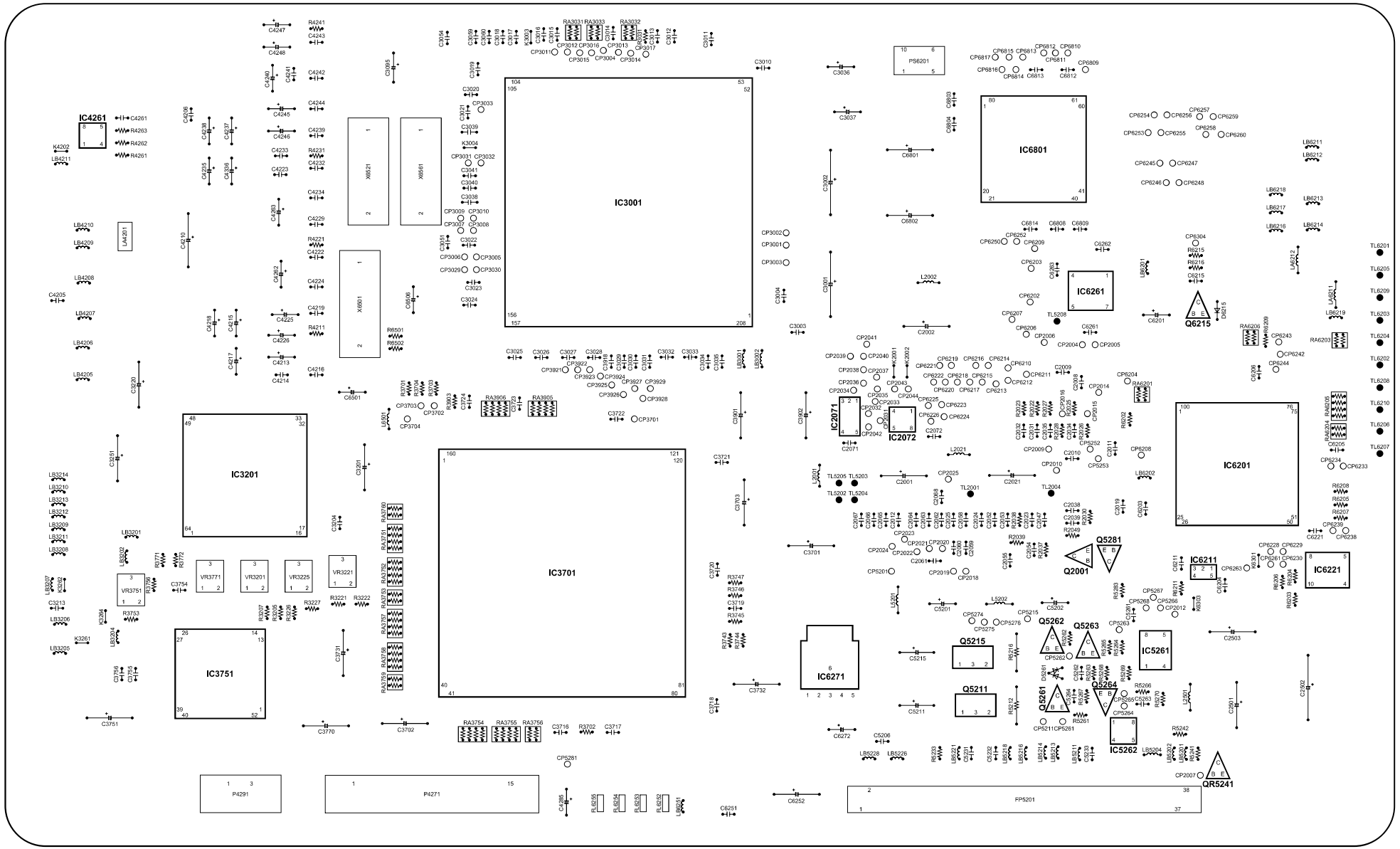
FRONT3 P.C.B.



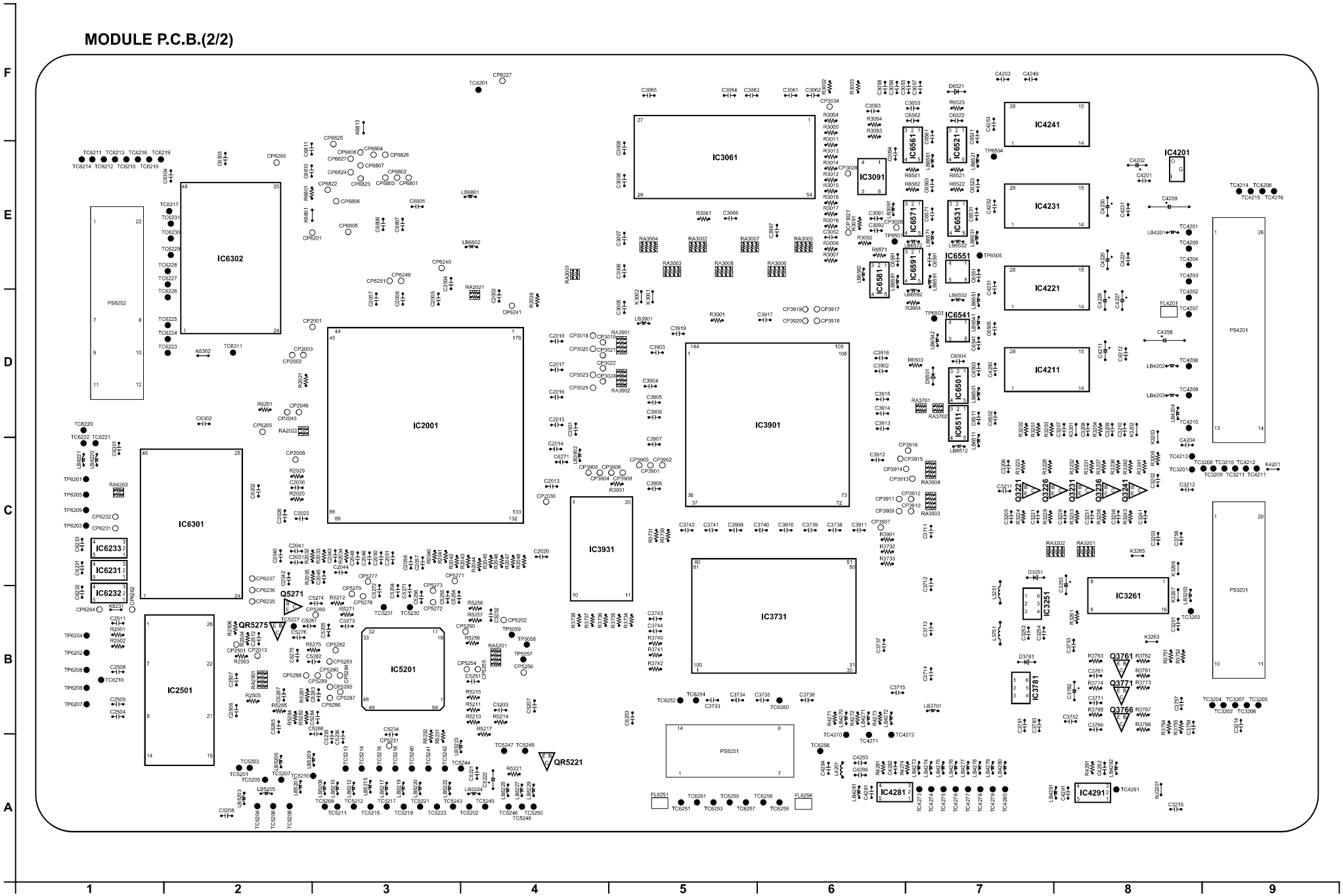

FRONT 3 P.C.B.
VR4721
EVJCAEF01A14
IC4731
C0CAB8B000071
(M5218AFP)
J4731
VJJ0578
(HP)
TO FP6001
MOTHER P.C.B.
(QP)
FP4701
1 HP-MUTE
2 +9V
3 HP-L
4 AGND
5 HP-R
6 -9V
7 RMTR-LED
8 525P-LED
9 AONLY-LED
10
11
12 D+5V
13 REMOCON
14 NSW+3.3V
15 DGND
16 POWER-SW
AUDIO SIGNAL PATH
JA-A
RWJ1101400D
DGND
POWER-SW
NSW+3.3V
REMOCON
D+5V
AONLY-LED
525P-LED
RMTR-LED
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
FRONT 1 P.C.B.
TO FP6002
MOTHER P.C.B.
(QP)
FP6201
6 PA01
5 PA11
4 PA21
3 D+5V
2 DGND
1 DNR-LED
(PAUSE)
(PLAY)
(STOP)
(GROUP)
(DNR)
(FWD-SKIP)
(RVS-SKIP)
(OPEN/CLOSE)
D6201
DNR-LED
LNJ301MPUJAD
FRONT 2 P.C.B.
(REMASTER)
(AUDIOONLY)
(POWER)
D6103
REMASTER-LED
LNJ301MPUJAD
D6104
AUDIO-ONLY
LNJ401NPYJA
D6105
525P-LED
LMW9ABBYB0A1
D6106
MAZ4051QMF
(MA4051-MTA)
IC6101
B3RAD0000029
(GP1UD272XK)
C6101
6.3V47
C6102
0.1


OPTICAL PICK UP UNIT
TERMINAL P.C.B.
FP5001
1 GND
2 P IN(CD)
3 T2(CD)
4 FE2(CD)
5 V REF2.2(CD)
6 T1(CD)
7 LD(+)(CD)
8 GND
9 FE1
10 VCC 5V
11 TB(DVD)
12 TC(DVD)
13 TD(DVD)
14 TA(DVD)
15 V REF2.2(DVD)
16 P IN(DVD)
17 GAIN H/L
18 F2(DVD)
19 F1(DVD)
20 RFN
21 RFP
22 GND
23 GND
24 LD(+)(DVD)
25 GND
26 3.3V HFM
27 T(-)
28 F(-)
29 F(+)
30 T(+)
FP5002
T(+) 38
F(+) 37
F(-) 36
T(-) 35
3.3V HFM 34
GND 33
LD(+)(DVD) 32
GND 31
GND 30
RFP 29
RFN 28
F1(DVD) 27
F2(DVD) 26
GAIN H/L 25
P IN(DVD) 24
V REF 2.2V(DVD) 23
TA(DVD) 22
TD(DVD) 21
TC(DVD) 20
TB(DVD) 19
VCC 5V 18
FE1 17
GND 16
LD(+)(CD) 15
T1(CD) 14
V REF 2.2V(CD) 13
FE2(CD) 12
T2(CD) 11
P IN(CD) 10
GND 9
IN SW1 8
TRV2 7
TRV1 6
SP2 5
SP1 4
FG3 3
FG2 2
FG1 1
FP5201
1 T(+)
2 F(+)
3 F(-)
4 T(-)
5 3.3V HFM
6 GND
7 LD(+)(DVD)
8 GND
9 GND
10 RFP
11 RFN
12 F1(DVD)
13 F2(DVD)
14 GAIN H/L
15 P IN(DVD)
16 V REF 2.2V(DVD)
17 TA(DVD)
18 TD(DVD)
19 TC(DVD)
20 TB(DVD)
21 VCC 5V
22 FE1
23 GND
24 LD(+)(CD)
25 T1(CD)
26 V REF 2.2V(CD)
27 FE2(CD)
28 T2(CD)
29 P IN(CD)
30 GND
31 IN SW1
32 TRV2
33 TRV1
34 SP2
35 SP1
36 FG3
37 FG2
38 FG1
MODULE P.C.B.
PS6251
M +9V 1
D GND(M 9V CTL) 2
D +5V 3
D +2.5V 4
5
D +3.3V 6
A +5V 7
A GND 8
D GND 9
D GND 10
D GND 11
D GND 12
D GND 13
M GND 14
PS6202
CMD 18
STATUS 17
DSP CLK 16
D GND 15
TRAY REF 14
TRAY DRV 13
TRAY MUTE 12
V SYNC 11
REF 10
GEN RST 9
AFP RFF 8
D GND 7
TRAY SW+ 6
PI SEL/PWR OFF 5
D GND 4
SDA 3
SCL 2
TRAY/TRV 1
PS4201
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
A MUT
Z FLAG
DAC SEL192
A DAC 5V
A DAC 5V
A DAC GND
MIX L
A DAC GND
MIX R
A DAC GND
FL
A DAC GND
FR
A DAC GND
SL
A DAC GND
SR
A DAC GND
CNT
A DAC GND
SW
AC3H
D GND
AUDIO DIGITAL
PS3201
1 2 3 4 5 6 7 8 9 10
V GND
PR/CR/R
V GND
PB/CB/B
V GND
Y/G
V GND
C
V GND
Y
JK4501
JK4502
COX
JK3541
JK3581
PP4201
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
A MUT
Z FLAG
DAC SEL192
A DAC 5V
A DAC 5V
A DAC GND
MIX L
A DAC GND
MIX R
A DAC GND
FL
A DAC GND
FR
A DAC GND
SL
A DAC GND
SR
A DAC GND
CNT
A DAC GND
SW
AC3H
D GND
AUDIO DIGITAL
PP3201
1 2 3 4 5 6 7 8 9 10
V GND
PR/CR/R
V GND
PB/CB/B
V GND
Y/G
V GND
C
V GND
Y
PP6001
TRAY/TRV 1
SCL 2
SDA 3
D GND 4
PI SEL/PWR OFF 5
TRAY SW+ 6
D GND 7
AFP RFF 8
GEN RST 9
REF 10
V SYNC 11
TRAY MUTE 12
TRAY DRV 13
TRAY REF 14
D GND 15
DSP CLK 16
STATUS 17
CMD 18
PP1102
M +9V 1
D GND(M 9V CTL) 2
D +5V 3
D +2,5V 4
5
D +3,3V 6
A +5V 7
A GND 8
D GND 9
D GND 10
D GND 11
D GND 12
D GND 13
M GND 14
MOTHER P.C.B.
MECHANISM UNIT
TRAY OPEN SWITCH
FG
PP6002
1 TRAY SW(-)
2 D GND
PP1101
1 NSW -10.5V
2 A GND
3 NSW +10.5V
4 A GND
5 A +5V
6 D GND(M 9V CTL)
7 D +2.5V
8 D GND
9 D +2.5V
10 D GND
11 D +5V
12 M GND
13 M +9V
14 POWER OFF L
15 NSW +5V
16 FL H(+)
17 FL H(-)
18 FL -30.8V
FP6002
DNR LED 1
D GND 2
D +5V 3
PA21 4
PA11 5
PA01 6
FIP
JK4771
FP6001
HP MUTE 16
+9V 15
HP L 14
A GND 13
HP R 12
-9V 11
RMTR LED 10
525P LED 9
A ONLY LED 8
7
6
D +5V 5
REMOTE CTL 4
NSW +3.3V 3
D GND 2
POWER SW 1
POWER SUPLLY P.C.B.
PS1101
NSW -10.5V 1
A GND 2
NSW +10.5V 3
A GND 4
A +5V 5
D GND(M 9V CTL) 6
D +2.5V 7
D GND 8
D +2.5V 9
D GND 10
D +5V 11
M GND 12
M +9V 13
POWER OFF L 14
NSW +5V 15
FL H(+) 16
FL H(-) 17
FL -30.8V 18
P1001
FP6201
DNR LED 1
D GND 2
D +5V 3
PA21 4
PA11 5
PA01 6
FRONT1 P.C.B.
FRONT2 P.C.B.
D GND 1
POWER SW 2
NSW +3.3V 3
REMOTE CTL 4
D +5V 5
6
7
A ONLY LED 8
525P LED 9
RMTR LED 10
JA A
D GND 1
POWER SW 2
NSW +3.3V 3
REMOTE CTL 4
D +5V 5
6
7
A ONLY LED 8
525P LED 9
RMTR LED 10
FP4701
HP MUTE 1
+9V 2
HP L 3
A GND 4
HP R 5
-9V 6
RMTR LED 7
525P LED 8
A ONLY LED 9
10
11
D +5V 12
REMOTE CTL 13
NSW +3.3V 14
D GND 15
POWER SW 16
J4731
FRONT3 P.C.B.
F
E
D
C
B
A
1 2 3 4 5 6 7 8 9 10

MODULE P.C.B.(1/2)



MODULE P.C.B.(2/2)



MODULE P.C.B.

Transistor		CP2006	D-7 C	CP3906	C-4 F	CP6215	D-7 C	TC3204	B-9 F	TC6216	E-1 F
Q2001	C-7 C	CP2007	A-8 C	CP3907	C-6 F	CP6216	D-7 C	TC3205	B-9 F	TC6217	E-1 F
Q3221	C-7 F	CP2008	C-2 F	CP3908	C-5 F	CP6217	D-7 C	TC3206	B-9 F	TC6218	E-1 F
Q3226	C-7 F	CP2009	C-7 C	CP3909	C-6 F	CP6218	D-7 C	TC3207	B-9 F	TC6219	E-1 F
Q3231	C-8 F	CP2010	C-7 C	CP3910	C-7 F	CP6219	D-6 C	TC3208	C-8 F	TC6220	D-1 F
Q3236	C-8 F	CP2012	B-8 C	CP3911	C-6 F	CP6220	D-6 C	TC3209	C-9 F	TC6221	C-1 F
Q3241	C-8 F	CP2013	B-2 F	CP3912	C-7 F	CP6221	D-6 C	TC3210	C-9 F	TC6222	C-1 F
Q3761	B-8 F	CP2014	D-7 C	CP3913	C-7 F	CP6222	D-6 C	TC3211	C-9 F	TC6223	D-1 F
Q3766	B-8 F	CP2015	D-7 C	CP3914	C-6 F	CP6223	D-6 C	TC4201	E-8 F	TC6224	D-1 F
Q3771	B-8 F	CP2016	D-7 C	CP3915	C-6 F	CP6224	D-6 C	TC4202	D-8 F	TC6225	D-1 F
Q5211	B-7 C	CP2018	C-7 C	CP3916	C-6 F	CP6225	D-6 C	TC4203	E-8 F	TC6226	D-1 F
Q5215	B-7 C	CP2019	C-7 C	CP3917	D-6 F	CP6226	C-6 C	TC4204	E-8 F	TC6227	E-1 F
Q5261	B-7 C	CP2020	C-6 C	CP3918	D-6 F	CP6227	F-4 F	TC4205	E-8 F	TC6228	E-1 F
Q5262	B-7 C	CP2021	C-6 C	CP3919	D-6 F	CP6228	C-8 C	TC4206	E-9 F	TC6229	E-2 F
Q5263	B-7 C	CP2022	C-6 C	CP3920	D-6 F	CP6229	C-9 C	TC4207	D-8 F	TC6230	E-2 F
Q5264	B-7 C	CP2023	C-6 C	CP3921	D-4 C	CP6230	C-9 C	TC4208	D-8 F	TC6231	E-2 F
Q5271	B-2 F	CP2024	C-6 C	CP3922	D-4 C	CP6231	C-1 F	TC4209	D-8 F	TC6251	A-5 F
Q5281	C-7 C	CP2025	C-6 C	CP3923	D-4 C	CP6232	C-1 F	TC4210	D-8 F	TC6252	B-5 F
Q6215	D-8 C	CP2030	C-4 F	CP3924	D-4 C	CP6233	C-9 C	TC4211	C-9 F	TC6253	A-5 F
Transistor-resistors		CP2031	C-6 C	CP3925	D-4 C	CP6234	C-9 C	TC4212	C-9 F	TC6254	B-5 F
QR5221	A-4 F	CP2032	D-6 C	CP3926	D-4 C	CP6235	B-2 F	TC4213	C-8 F	TC6255	A-5 F
QR5241	A-8 C	CP2033	D-6 C	CP3927	D-5 C	CP6236	B-2 F	TC4214	E-9 F	TC6256	A-6 F
QR5275	B-2 F	CP2034	D-6 C	CP3928	D-5 C	CP6237	C-2 F	TC4215	E-9 F	TC6257	A-5 F
Integrated Circuits		CP2035	D-6 C	CP3929	D-5 C	CP6238	C-9 C	TC4216	E-9 F	TC6258	A-6 F
IC2001	C-3 F	CP2036	D-6 C	CP3930	D-4 C	CP6239	C-9 C	TC4270	A-6 F	TC6259	A-6 F
IC2071	C-5 C	CP2037	D-6 C	CP5201	C-6 C	CP6240	E-3 F	TC4271	A-6 F	TC6260	B-6 F
IC2072	C-5 C	CP2038	D-6 C	CP5202	B-4 F	CP6241	D-4 F	TC4272	A-6 F	TC6261	A-5 F
IC2501	B-1 F	CP2039	D-6 C	CP5211	B-7 C	CP6242	D-9 C	TC4273	A-7 F	TC6311	D-2 F
IC3001	D-4 C	CP2040	D-6 C	CP5215	B-7 C	CP6243	D-9 C	TC4274	A-7 F	TL2001	C-7 C
IC3061	E-5 F	CP2041	D-6 C	CP5231	A-3 F	CP6244	D-9 C	TC4275	A-7 F	TL2004	C-7 C
IC3091	E-6 F	CP2042	C-6 C	CP5252	C-7 C	CP6245	E-8 C	TC4276	A-7 F	TL5202	C-6 C
IC3201	C-2 C	CP2043	D-6 C	CP5253	C-7 C	CP6246	E-8 C	TC4277	A-7 F	TL5203	C-6 C
IC3251	B-7 F	CP2044	D-6 C	CP5254	B-4 F	CP6247	E-8 C	TC4278	A-7 F	TL5204	C-6 C
IC3261	B-8 F	CP2045	D-2 F	CP5255	B-4 F	CP6248	E-8 C	TC4279	A-7 F	TL5205	C-6 C
IC3701	B-4 C	CP2046	D-2 F	CP5256	B-4 F	CP6249	E-3 F	TC4280	A-7 F	TL5208	D-7 C
IC3731	B-5 F	CP2501	B-2 F	CP5260	B-4 F	CP6250	E-7 C	TC4291	A-8 F	TL6201	E-9 C
IC3751	B-2 C	CP3001	E-5 C	CP5261	B-7 C	CP6251	E-3 F	TC5201	A-2 F	TL6202	D-9 C
IC3781	B-7 F	CP3002	E-5 C	CP5262	B-7 C	CP6252	E-7 C	TC5202	A-4 F	TL6203	D-9 C
IC3901	C-5 F	CP3003	D-5 C	CP5263	B-8 C	CP6253	E-8 C	TC5203	A-2 F	TL6204	D-9 C
IC3931	C-4 F	CP3004	F-4 C	CP5264	B-8 C	CP6254	E-8 C	TC5204	A-2 F	TL6205	D-9 C
IC4201	E-8 F	CP3005	D-4 C	CP5265	B-8 C	CP6255	E-8 C	TC5205	A-2 F	TL6206	C-9 C
IC4211	D-7 F	CP3006	D-3 C	CP5266	B-8 C	CP6256	E-8 C	TC5206	A-2 F	TL6207	C-9 C
IC4221	D-7 F	CP3007	E-3 C	CP5267	B-8 C	CP6257	E-8 C	TC5207	A-2 F	TL6208	D-9 C
IC4231	E-7 F	CP3008	E-4 C	CP5268	B-8 C	CP6258	E-8 C	TC5208	A-2 F	TL6209	D-9 C
IC4241	F-7 F	CP3009	E-3 C	CP5271	C-3 F	CP6259	E-8 C	TC5209	A-3 F	TL6210	D-9 C
IC4261	E-1 C	CP3010	E-4 C	CP5272	B-3 F	CP6260	E-8 C	TC5210	A-2 F	TP5057	B-4 F
IC4281	A-6 F	CP3011	F-4 C	CP5273	B-3 F	CP6261	C-8 C	TC5211	A-3 F	TP5058	B-4 F
IC4291	A-8 F	CP3012	F-4 C	CP5274	B-7 C	CP6262	B-1 F	TC5212	A-3 F	TP5059	B-4 F
IC5201	B-3 F	CP3013	F-4 C	CP5275	B-7 C	CP6263	C-8 C	TC5213	A-3 F	TP6201	C-1 F
IC5261	B-8 C	CP3014	F-4 C	CP5276	B-7 C	CP6264	B-1 F	TC5214	A-3 F	TP6202	B-1 F
IC5262	B-8 C	CP3015	F-4 C	CP5277	C-3 F	CP6265	E-2 F	TC5215	A-3 F	TP6203	C-1 F
IC6201	C-8 C	CP3016	F-4 C	CP5278	B-3 F	CP6304	E-8 C	TC5216	A-3 F	TP6204	B-1 F
IC6211	C-8 C	CP3017	F-5 C	CP5279	B-3 F	CP6801	E-3 F	TC5217	A-3 F	TP6205	C-1 F
IC6221	C-9 C	CP3018	D-4 F	CP5280	B-3 F	CP6802	E-3 F	TC5218	A-3 F	TP6206	B-1 F
IC6231	C-1 F	CP3019	D-4 F	CP5281	A-4 C	CP6803	E-3 F	TC5219	A-3 F	TP6207	B-1 F
IC6232	B-1 F	CP3020	D-4 F	CP5282	B-3 F	CP6804	E-3 F	TC5221	A-3 F	TP6208	B-1 F
IC6233	C-1 F	CP3021	D-4 F	CP5283	B-3 F	CP6805	E-3 F	TC5223	A-3 F	TP6209	C-1 F
IC6261	D-7 C	CP3022	D-4 F	CP5284	B-3 F	CP6806	E-3 F	TC5227	B-2 F	TP6501	E-6 F
IC6271	B-6 C	CP3023	D-4 F	CP5285	B-3 F	CP6807	E-3 F	TC5230	B-3 F	TP6503	D-7 F
IC6301	C-1 F	CP3024	D-4 F	CP5286	B-3 F	CP6808	E-3 F	TC5231	B-3 F	TP6504	E-7 F
IC6302	E-2 F	CP3025	D-4 F	CP5287	B-3 F	CP6809	F-7 C	TC5240	A-3 F	TP6505	E-7 F
IC6501	D-7 F	CP3026	E-6 F	CP5288	B-2 F	CP6810	F-7 C	TC5241	A-3 F	Connectors	
IC6511	D-7 F	CP3027	E-6 F	CP5289	B-3 F	CP6811	F-7 C	TC5242	A-3 F	FP5201	A-6 C
IC6521	E-7 F	CP3028	E-6 F	CP5290	B-3 F	CP6812	F-7 C	TC5243	A-3 F	P4271	A-3 C
IC6531	E-7 F	CP3029	D-3 C	CP6201	E-2 F	CP6813	F-7 C	TC5244	A-3 F	P4291	A-2 C
IC6541	D-7 F	CP3031	E-3 C	CP6202	D-7 C	CP6814	F-7 C	TC5245	A-4 F	PS3201	B-9 F
IC6551	E-7 F	CP3032	E-4 C	CP6203	D-7 C	CP6815	F-7 C	TC5246	A-4 F	PS4201	D-9 F
IC6561	E-6 F	CP3033	E-4 C	CP6204	D-8 C	CP6816	F-7 C	TC5247	A-4 F	PS6201	F-6 C
IC6571	E-6 F	CP3034	F-6 F	CP6205	D-2 F	CP6817	F-7 C	TC5248	A-4 F	PS6202	D-1 F
IC6581	E-6 F	CP3701	C-5 C	CP6206	D-7 C	CP6822	E-3 F	TC5249	A-4 F	PS6251	A-5 F
IC6591	E-6 F	CP3702	D-3 C	CP6207	D-7 C	CP6823	E-3 F	TC5250	A-4 F	VR3201	B-2 C
IC6801	E-7 C	CP3703	D-3 C	CP6208	C-8 C	CP6824	E-3 F	TC6201	F-4 F	VR3221	C-3 C
Test Points		CP3704	D-3 C	CP6209	E-7 C	CP6825	E-3 F	TC6210	B-1 F	VR3225	B-2 C
CP2001	D-2 F	CP3901	C-5 F	CP6210	D-7 C	CP6826	E-3 F	TC6211	E-1 F	VR3751	B-1 C
CP2002	D-2 F	CP3902	C-5 F	CP6211	D-7 C	CP6827	E-3 F	TC6212	E-1 F	VR3771	B-2 C
CP2003	D-2 F	CP3903	C-5 F	CP6212	D-7 C	TC3201	C-8 F	TC6213	E-1 F		
CP2004	D-7 C	CP3904	C-4 F	CP6213	D-7 C	TC3202	B-9 F	TC6214	E-1 F		
CP2005	D-7 C	CP3905	C-4 F	CP6214	D-7 C	TC3203	B-8 F	TC6215	E-1 F		

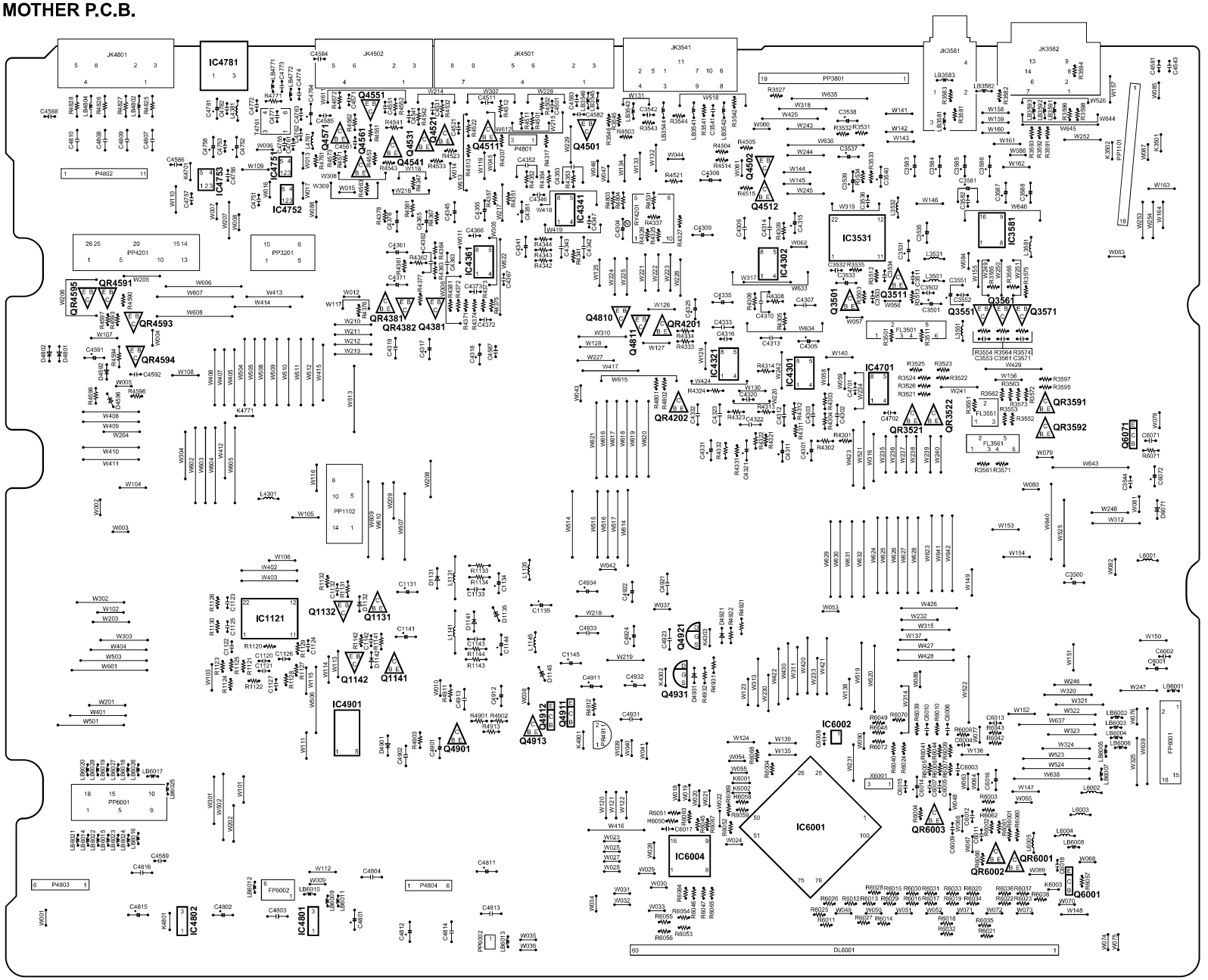
ADDRESS INFORMATION
C ...COMPONENT SIDE
F ...FOIL SIDE

MOTHER P.C.B.

Transistor		Transistor-resistors		IC4802	A-2
Q1131	C-3	QR3521	D-6	IC4901	B-3
Q1132	C-3	QR3522	D-6	IC6001	B-6
Q1141	C-3	QR3591	D-7	IC6002	B-6
Q1142	C-3	QR3592	D-7	IC6004	A-4
Q3501	E-6	QR4201	E-5	Connectors	
Q3511	E-6	QR4202	D-5	DL6001	A-5
Q3551	E-7	QR4381	E-3	FP6001	B-8
Q3561	E-7	QR4382	E-3	FP6002	A-3
Q3571	E-7	QR4591	E-2	JK3541	F-4
Q4381	E-3	QR4593	E-2	JK3581	F-6
Q4501	F-4	QR4594	D-2	JK3582	F-7
Q4502	E-5	QR4595	E-1	JK4501	F-4
Q4511	F-4	QR6001	A-7	JK4502	F-3
Q4512	E-5	QR6002	A-7	JK4801	F-1
Q4521	F-3	QR6003	B-6	P4801	E-4
Q4531	F-3	Integrated Circuits		P4802	E-1
Q4541	F-3	IC1121	C-1	P4803	A-1
Q4551	F-3	IC3531	E-6	P4804	A-3
Q4561	E-3	IC3581	E-7	PP1101	E-7
Q4571	F-3	IC4301	D-6	PP1102	C-3
Q4810	E-5	IC4302	E-5	PP3201	E-2
Q4811	E-5	IC4321	D-5	PP3801	F-6
Q4901	B-4	IC4341	E-4	PP4201	E-1
Q4911	B-4	IC4361	E-4	PP6001	B-1
Q4912	B-4	IC4701	D-6	PP6002	A-4
Q4913	B-4	IC4751	E-3		
Q4921	C-5	IC4752	E-3		
Q4931	B-5	IC4753	E-2		
Q6001	A-7	IC4781	F-2		
Q6071	D-8	IC4801	A-3		

ADDRESS INFORMATION

MOTHER P.C.B.


JK4801
IC4781
JK4502
JK4501
JK3541
JK3581
JK3582
PP3801
P4801
P4802
PP4201
PP3201
PP1102
PP6001
FP6002
IC4752
IC4753
IC4751
IC4341
IC4361
IC4302
IC3531
IC3581
IC4321
IC4301
IC4701
IC1121
IC4901
IC6002
IC6001
IC6004
IC4802
IC4801
DL6001
Q4551
Q4571
Q4561
Q4531
Q4521
Q4511
Q4501
Q4541
Q4502
Q4512
Q3501
Q3511
Q3561
Q3551
Q3571
QR4591
QR4595
QR4593
QR4594
QR4381
QR4382
Q4381
Q4810
Q4811
QR4201
QR4202
QR3591
QR3592
QR3521
QR3522
Q6071
Q1132
Q1131
Q1142
Q1141
Q4921
Q4931
Q4912
Q4911
Q4913
Q4901
QR6003
QR6001
QR6002
Q6001

FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
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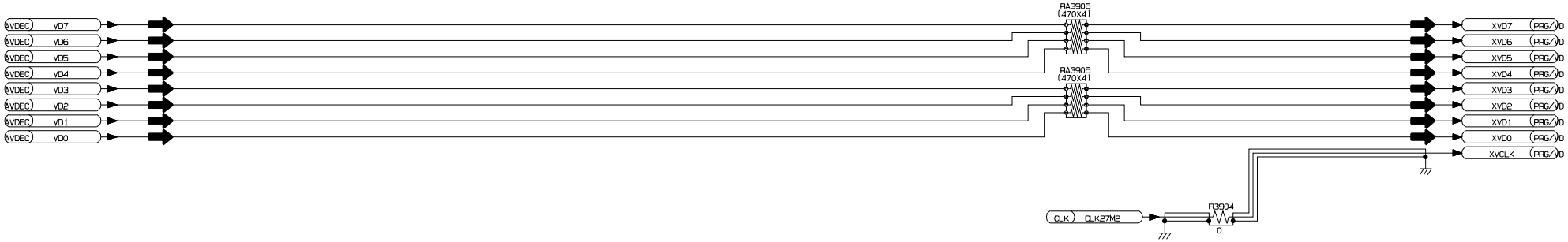
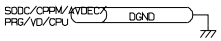
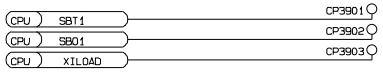
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58

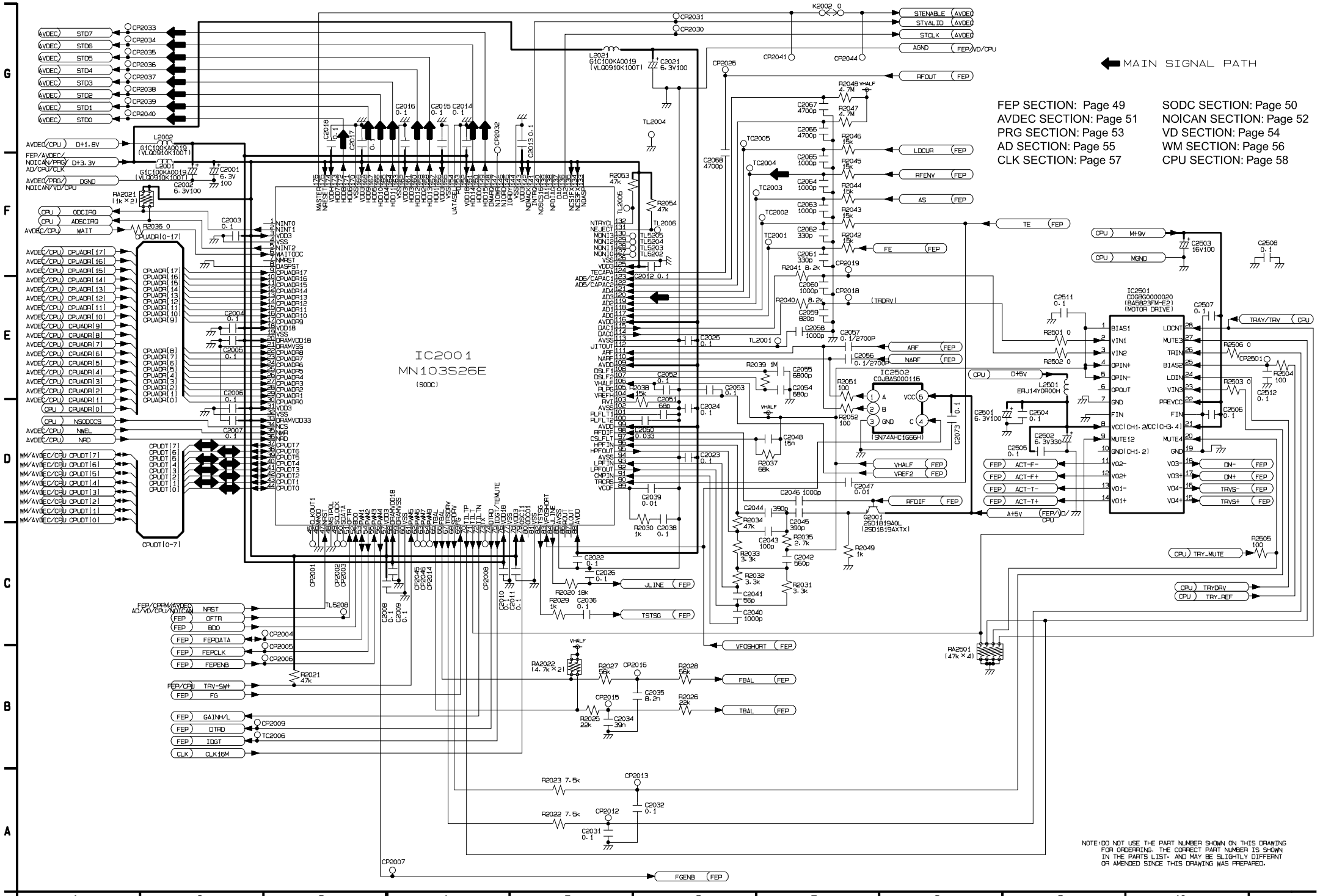


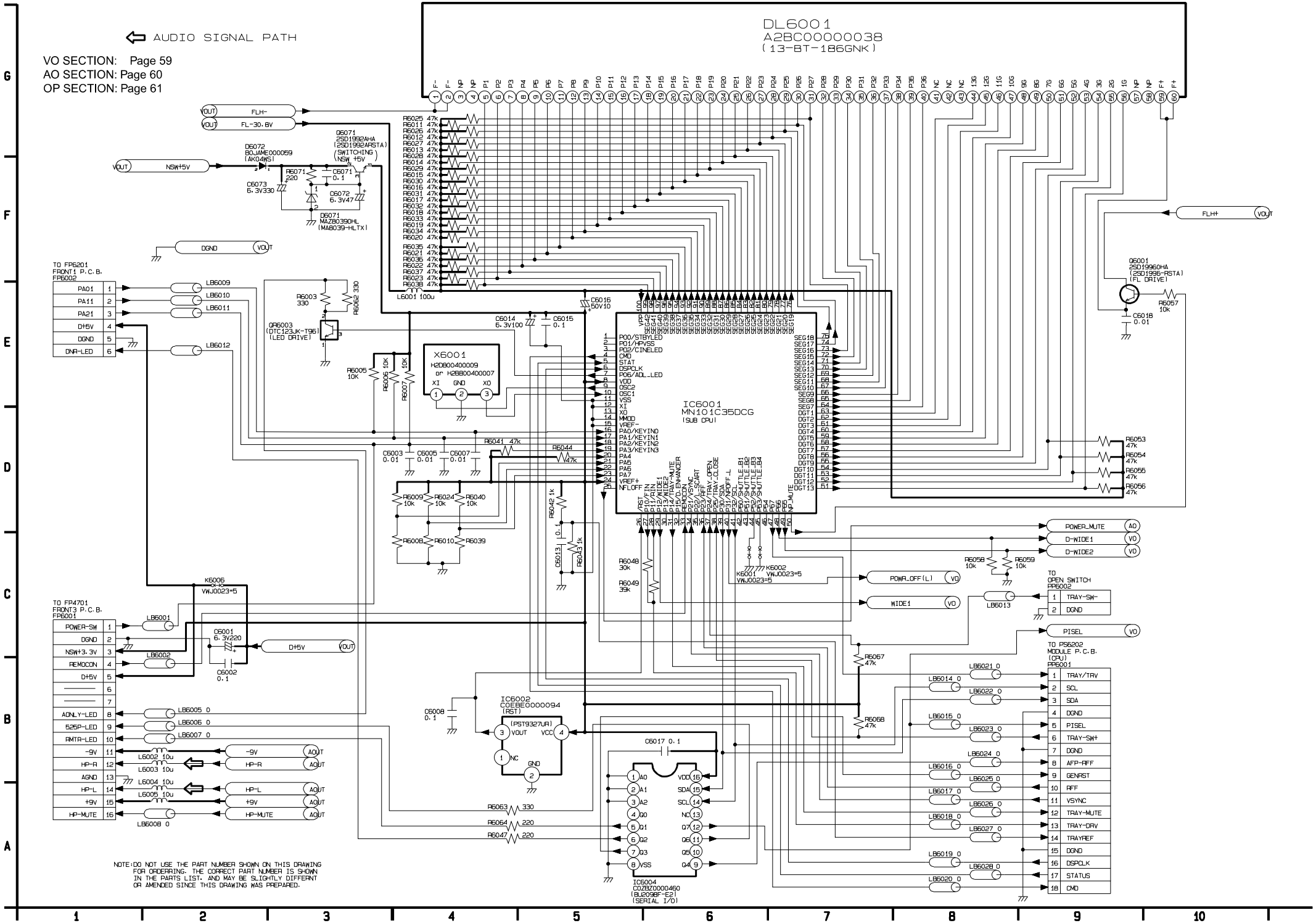


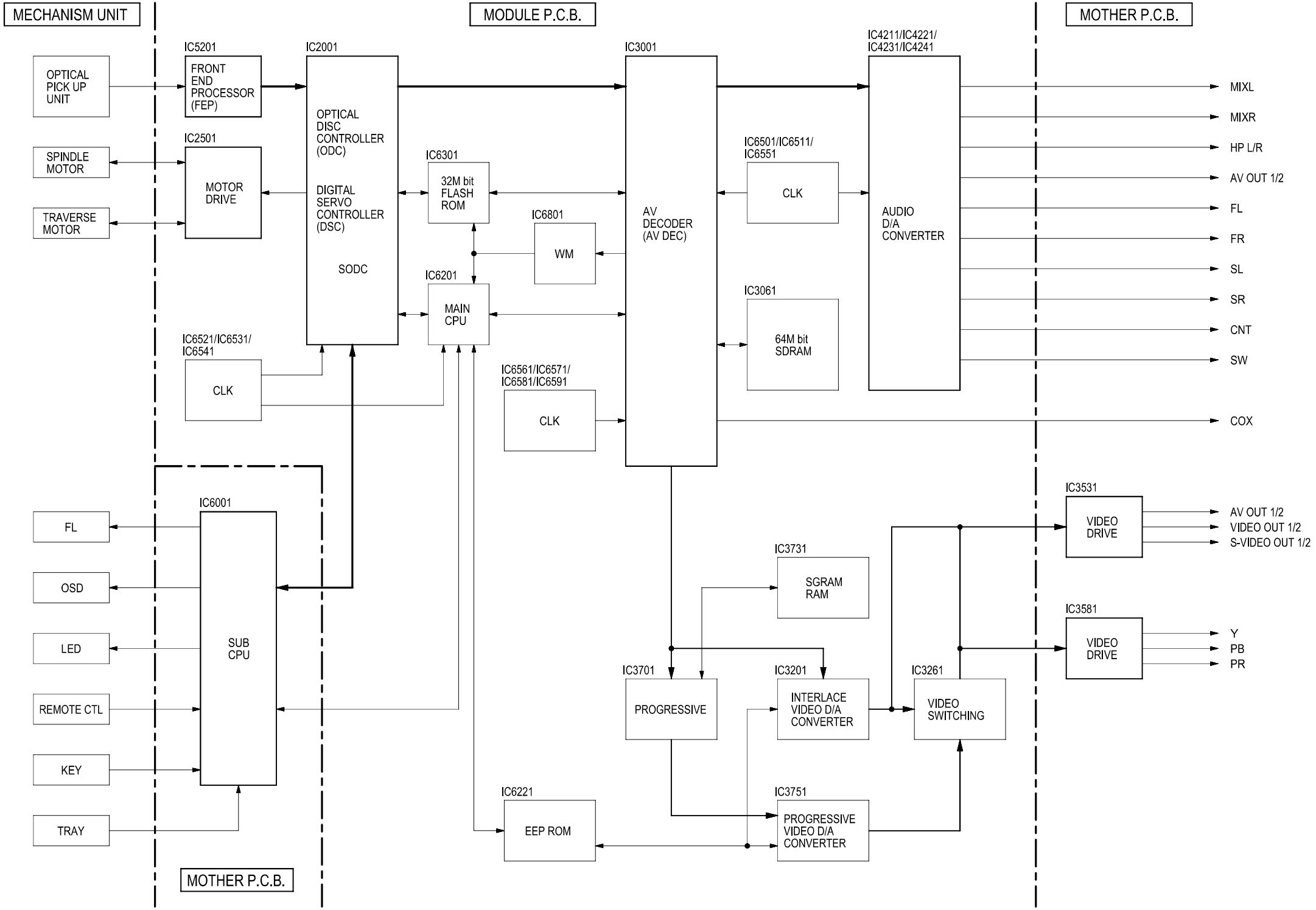


VIDEO SIGNAL PATH

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

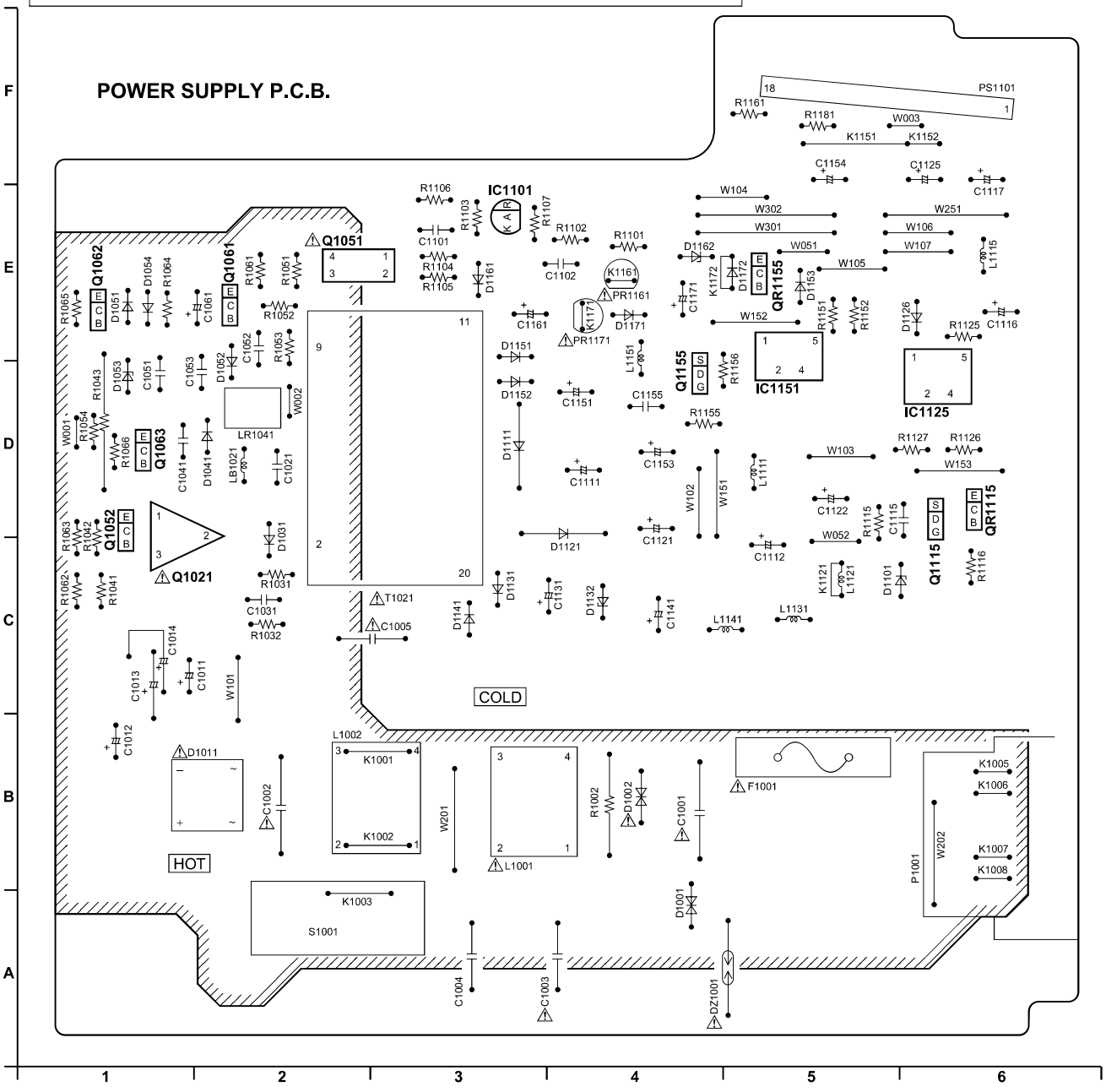

MAIN SIGNAL PATH
FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58
IC2001
MN103S26E
(SODC)
IC2501
C0GBG0000020
(BA5823FM-E2)
(MOTOR DRIVE)
IC2502
C0JBA5000116
(SN74AHC1G66H)
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


AUDIO SIGNAL PATH
VO SECTION: Page 59
AO SECTION: Page 60
OP SECTION: Page 61
DL6001
A2BC00000038
(13-BT-186GNK)
IC6001
MN101C35DCG
(SUB CPU)
X6001
H20B00400009
or H2BB00400007
IC6002
C0EBE0000094
(PST9327UR)
IC6004
C0ZBZ0000460
(BU2098F-E2)
(SERIAL I/O)
K6001
VWJ0023-5
K6002
VWJ0023-5
K6005
VWJ0023-5
Q6001
2SD1996HA
(2SD1996-RSTA)
(FL DRIVE)
Q6071
2SD1982AHA
(2SD1982ARSTA)
(SWITCHING)
(NSW +5V)
Q6072
B0JAME0000059
(AK04WS)
D6071
MAZ80390HL
(MA8039-HLTX)
QR6003
(DTC123JK-T96)
(LED DRIVE)
FLH-
FL-30.8V
NSW+5V
DGND
FLH+
D+5V
TO FP6201
FRONT1 P.C.B.
FP6002
TO FP4701
FRONT3 P.C.B.
FP6001
TO OPEN SWITCH
PP6002
TO PS6202
MODULE P.C.B.
(CPU)
PP6001
POWER_MUTE
D-WIDE1
D-WIDE2
POWR_OFF(L)
WIDE1
PISEL
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


MECHANISM UNIT
MODULE P.C.B.
MOTHER P.C.B.
OPTICAL PICK UP UNIT
SPINDLE MOTOR
TRAVERSE MOTOR
IC5201
FRONT END PROCESSOR (FEP)
IC2501
MOTOR DRIVE
IC2001
OPTICAL DISC CONTROLLER (ODC)
DIGITAL SERVO CONTROLLER (DSC)
SODC
IC6301
32M bit FLASH ROM
IC6801
WM
IC6201
MAIN CPU
IC6521/IC6531/ IC6541
CLK
IC3001
AV DECODER (AV DEC)
IC6501/IC6511/ IC6551
CLK
IC3061
64M bit SDRAM
IC6561/IC6571/ IC6581/IC6591
CLK
IC4211/IC4221/ IC4231/IC4241
AUDIO D/A CONVERTER
MIXL
MIXR
HP L/R
AV OUT 1/2
FL
FR
SL
SR
CNT
SW
COX
IC6001
SUB CPU
FL
OSD
LED
REMOTE CTL
KEY
TRAY
MOTHER P.C.B.
IC3731
SGRAM RAM
IC3701
PROGRESSIVE
IC3201
INTERLACE VIDEO D/A CONVERTER
IC3261
VIDEO SWITCHING
IC6221
EEP ROM
IC3751
PROGRESSIVE VIDEO D/A CONVERTER
IC3531
VIDEO DRIVE
AV OUT 1/2
VIDEO OUT 1/2
S-VIDEO OUT 1/2
IC3581
VIDEO DRIVE
Y
PB
PR

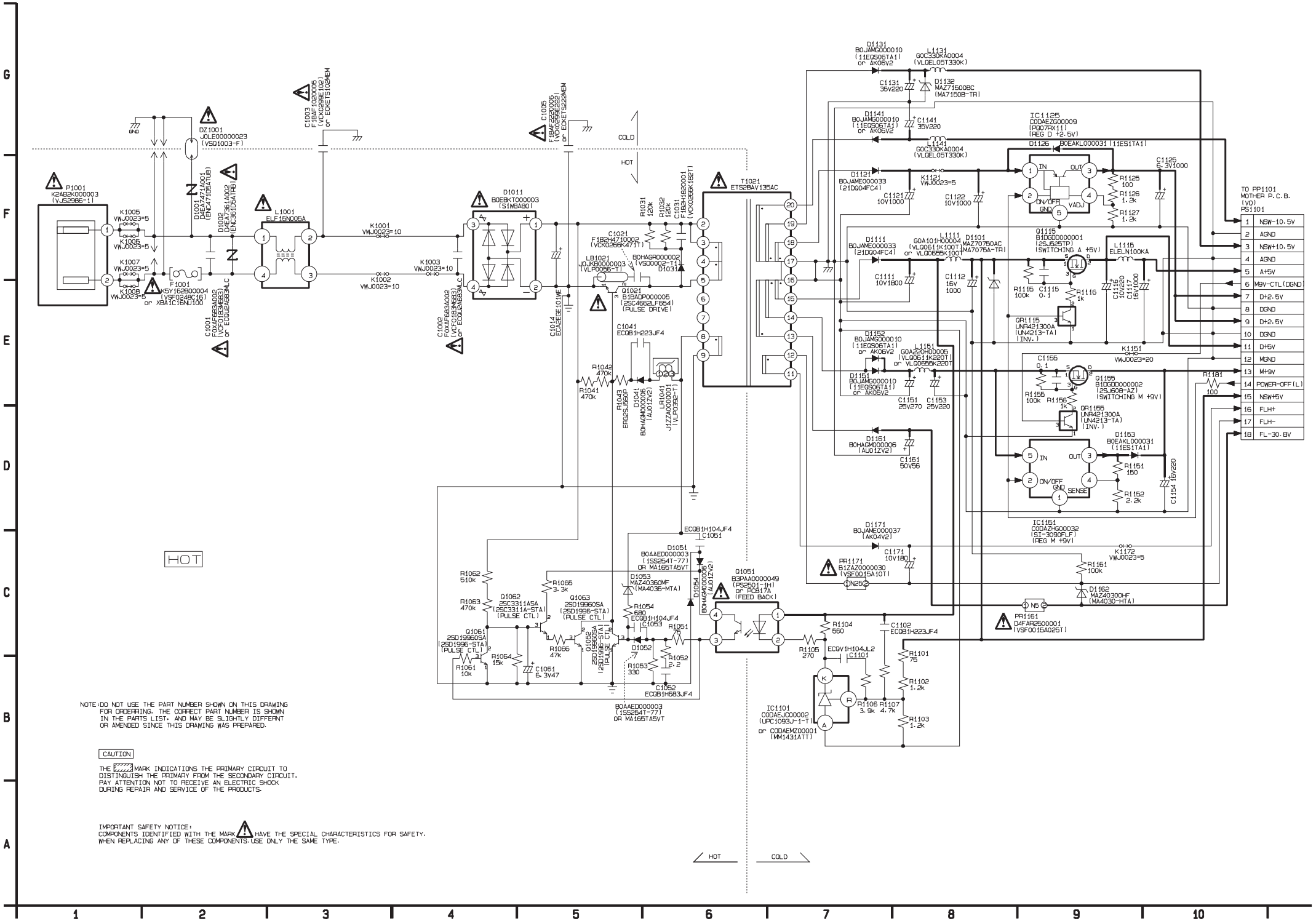
CAUTION THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

POWER SUPPLY P.C.B.



POWER SUPPLY P.C.B.			
Transistors		**Integrated Circuits**	
Q1021	C-1	IC1101	E-3
Q1051	E-2	IC1125	D-6
Q1052	D-1	IC1151	E-5
Q1061	E-2	**Connectors**	
Q1062	E-1	P1001	B-6
Q1063	D-1	PS1101	F-5
Q1115	D-6	DZ1001	A-5
Q1155	D-4		
Transistor-resistors			
QR1115	D-6		

ADDRESS INFORMATION


HOT
COLD
TO PP1101
MOTHER P.C.B.
(VO)
PS1101
1 NSW-10.5V
2 AGND
3 NSW+10.5V
4 AGND
5 A+5V
6 M9V-CTL(DGND
7 D+2.5V
8 DGND
9 D+2.5V
10 DGND
11 D+5V
12 MGND
13 M+9V
14 POWER-OFF(L)
15 NSW+5V
16 FLH+
17 FLH-
18 FL-30.8V
HOT
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
CAUTION
THE MARK INDICATIONS THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT. PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS.USE ONLY THE SAME TYPE.
HOT
COLD

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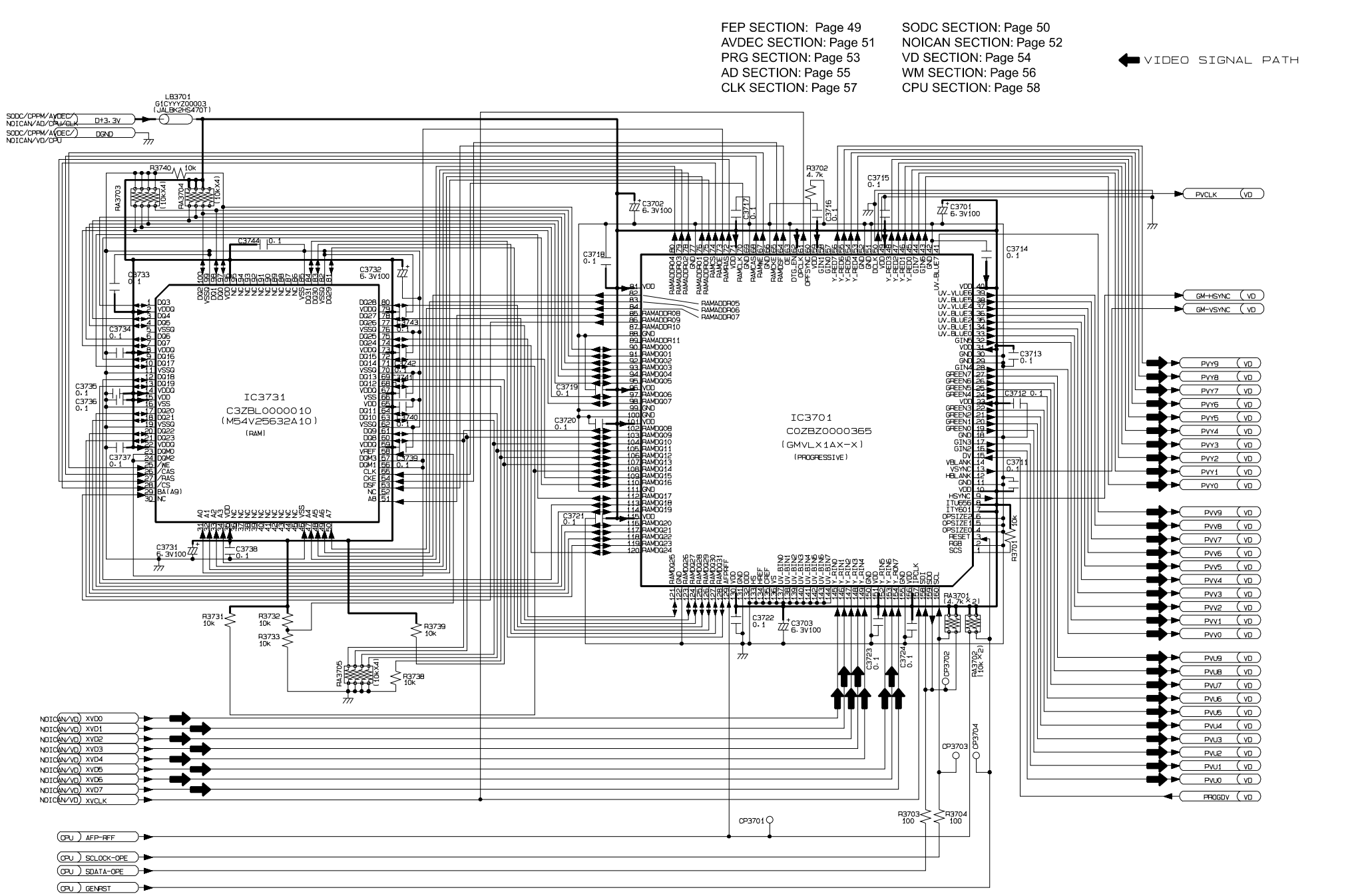
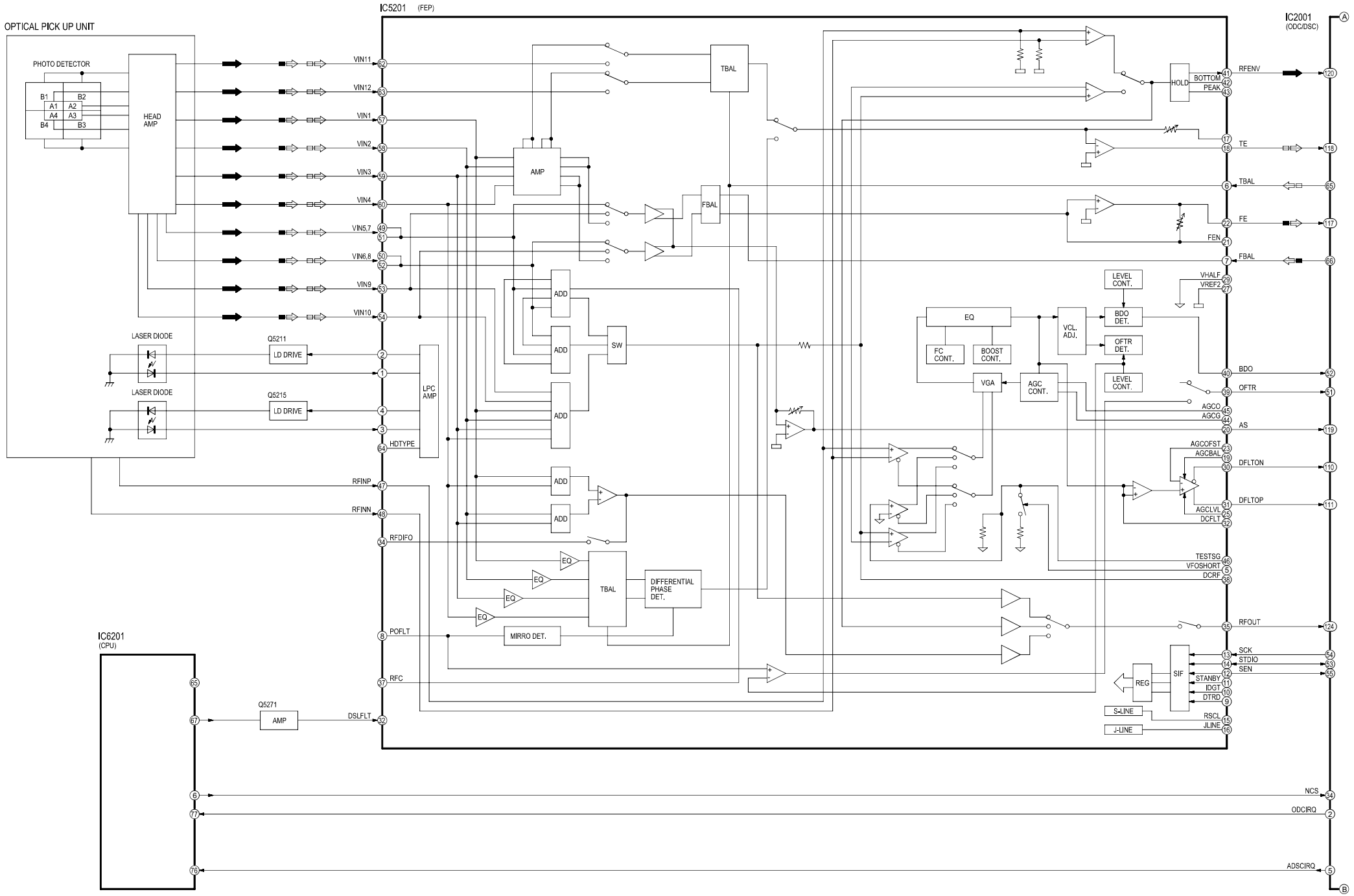
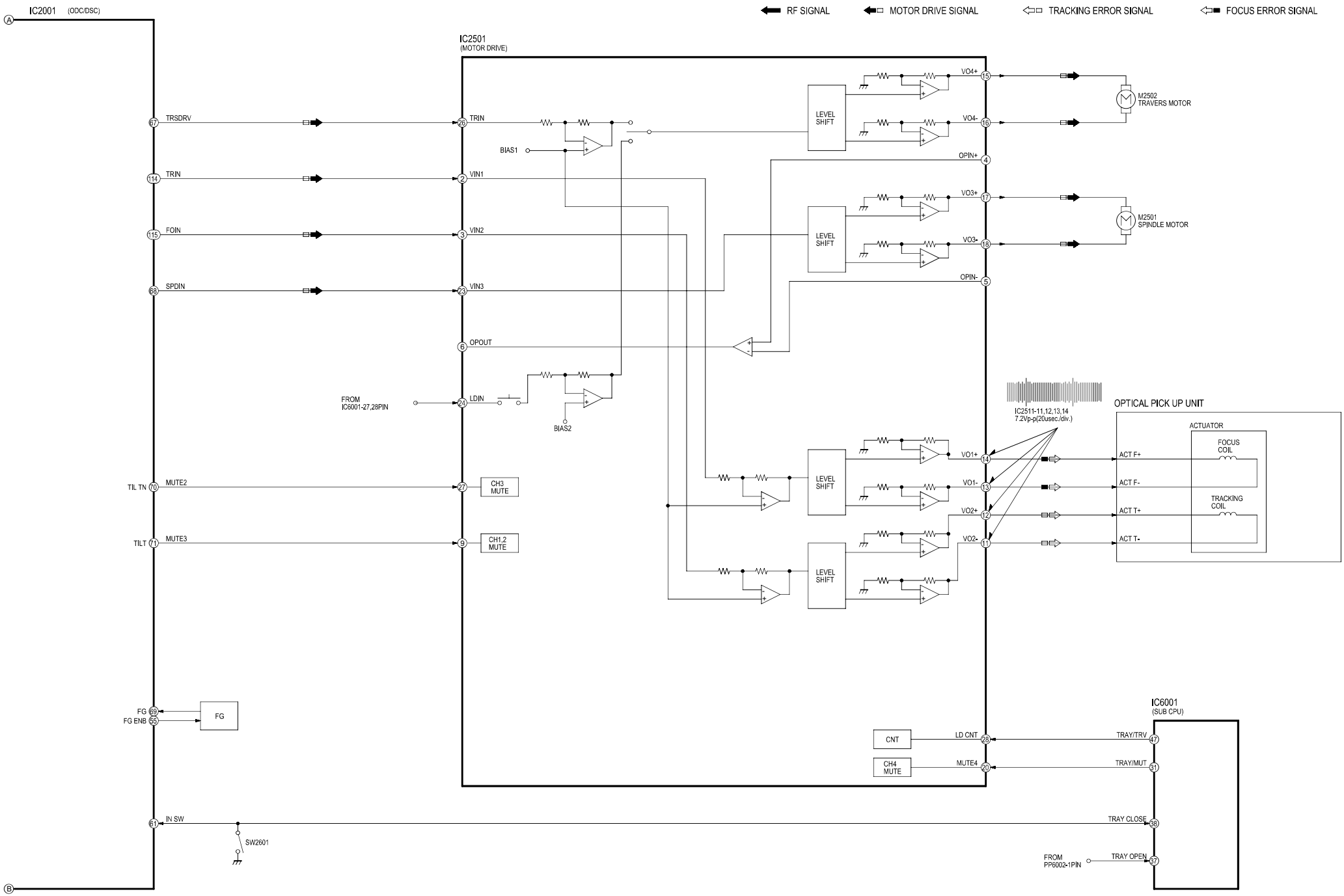
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58

VIDEO SIGNAL PATH

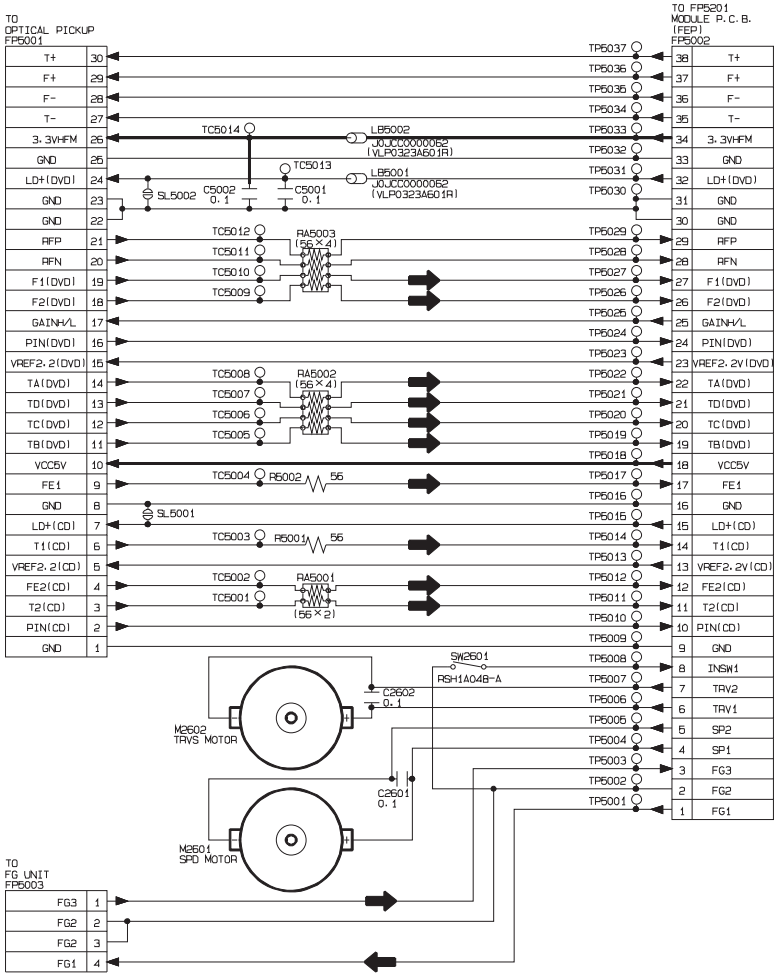


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

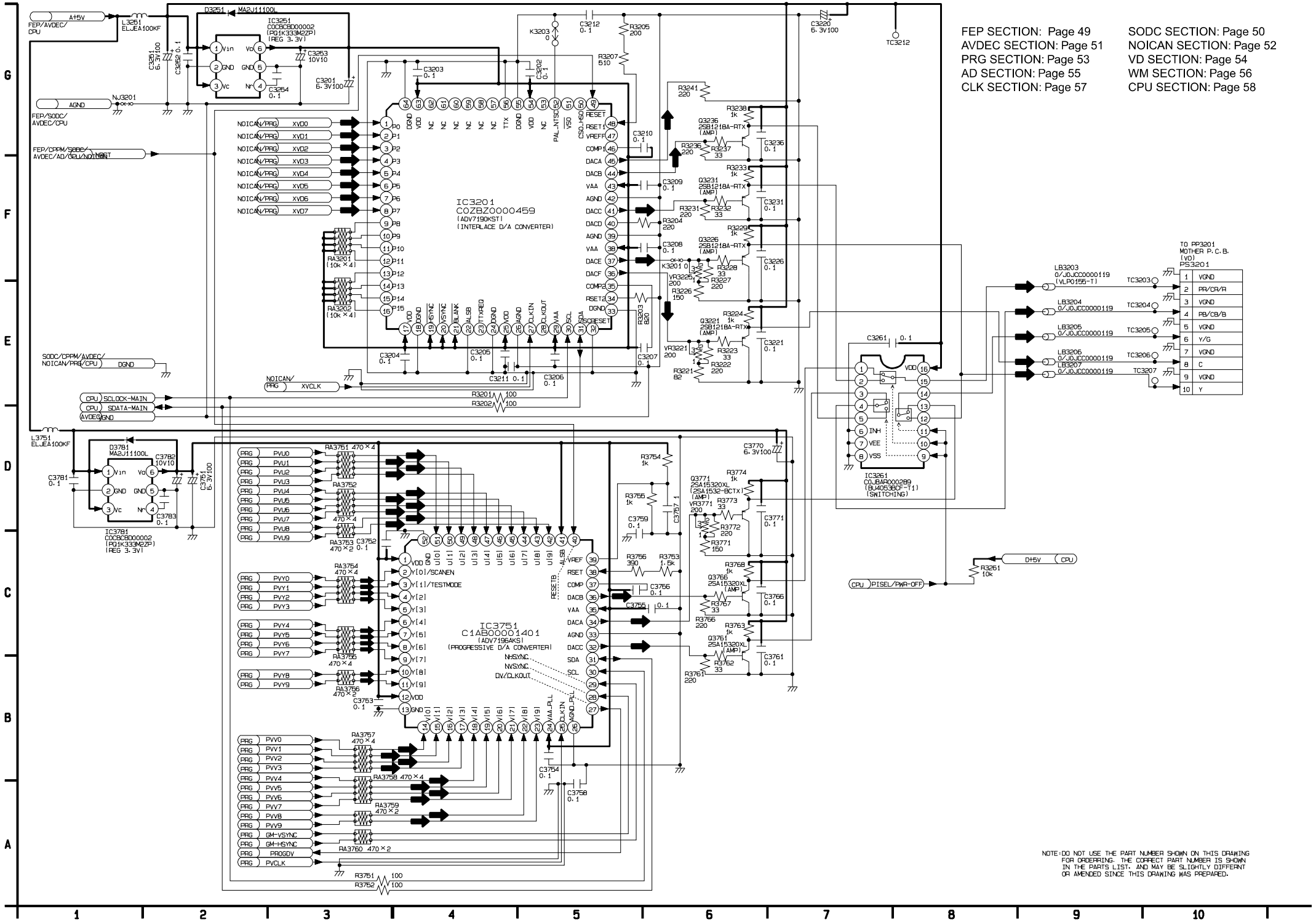

OPTICAL PICK UP UNIT
PHOTO DETECTOR
B1
B2
A1
A2
A4
A3
B4
B3
HEAD AMP
LASER DIODE
LASER DIODE
Q5211
LD DRIVE
Q5215
LD DRIVE
LPC AMP
IC5201 (FEP)
VIN11
VIN12
VIN1
VIN2
VIN3
VIN4
VIN5,7
VIN6,8
VIN9
VIN10
HDTYPE
RFINP
RFINN
RFDIFO
POFLT
RFC
DSLFLT
TBAL
AMP
FBAL
ADD
ADD
ADD
SW
ADD
ADD
EQ
EQ
EQ
EQ
TBAL
DIFFERENTIAL PHASE DET.
MIRRO DET.
IC6201 (CPU)
Q5271
AMP
HOLD
BOTTOM
PEAK
RFENV
TE
TBAL
FE
FEN
FBAL
LEVEL CONT.
VHALF
VREF2
EQ
FC CONT.
BOOST CONT.
VGA
AGC CONT.
VCL. ADJ.
BDO DET.
OFTR DET.
LEVEL CONT.
BDO
OFTR
AGCO
AGCG
AS
AGCOFST
AGCBAL
DFLTON
AGCLVL
DCFLT
DFLTOP
TESTSG
VFOSHORT
DCRF
RFOUT
SCK
STDIO
SEN
STANBY
IDGT
DTRD
RSCL
JLINE
S-LINE
J-LINE
REG
SIF
IC2001 (ODC/DSC)
NCS
ODCIRQ
ADSCIRQ

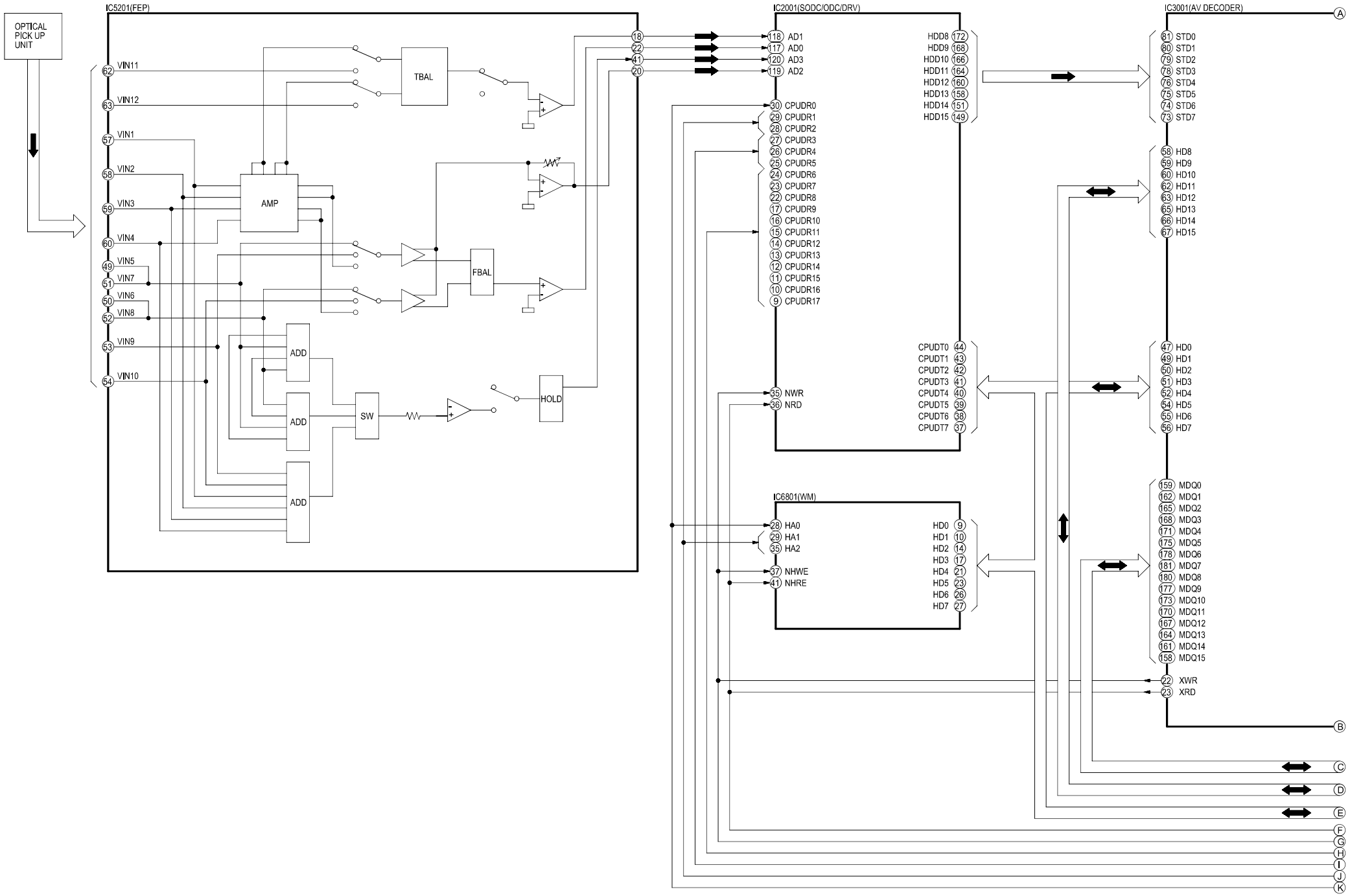

IC2001 (ODC/DSC)
RF SIGNAL
MOTOR DRIVE SIGNAL
TRACKING ERROR SIGNAL
FOCUS ERROR SIGNAL
IC2501
(MOTOR DRIVE)
TRSDRV
TRIN
FOIN
SPDIN
VIN1
VIN2
VIN3
OPOUT
LDIN
BIAS1
BIAS2
FROM IC6001-27,28PIN
LEVEL SHIFT
VO4+
VO4-
VO3+
VO3-
VO2+
VO2-
VO1+
VO1-
OPIN+
OPIN-
M2502 TRAVERS MOTOR
M2501 SPINDLE MOTOR
IC2511-11,12,13,14
7.2Vp-p(20usec./div.)
OPTICAL PICK UP UNIT
ACTUATOR
FOCUS COIL
TRACKING COIL
ACT F+
ACT F-
ACT T+
ACT T-
TIL TN
TILT
MUTE2
MUTE3
CH3 MUTE
CH1,2 MUTE
FG
FG ENB
IC6001
(SUB CPU)
CNT
CH4 MUTE
LD CNT
MUTE4
TRAY/TRV
TRAY/MUT
IN SW
SW2601
TRAY CLOSE
TRAY OPEN
FROM PP6002-1PIN

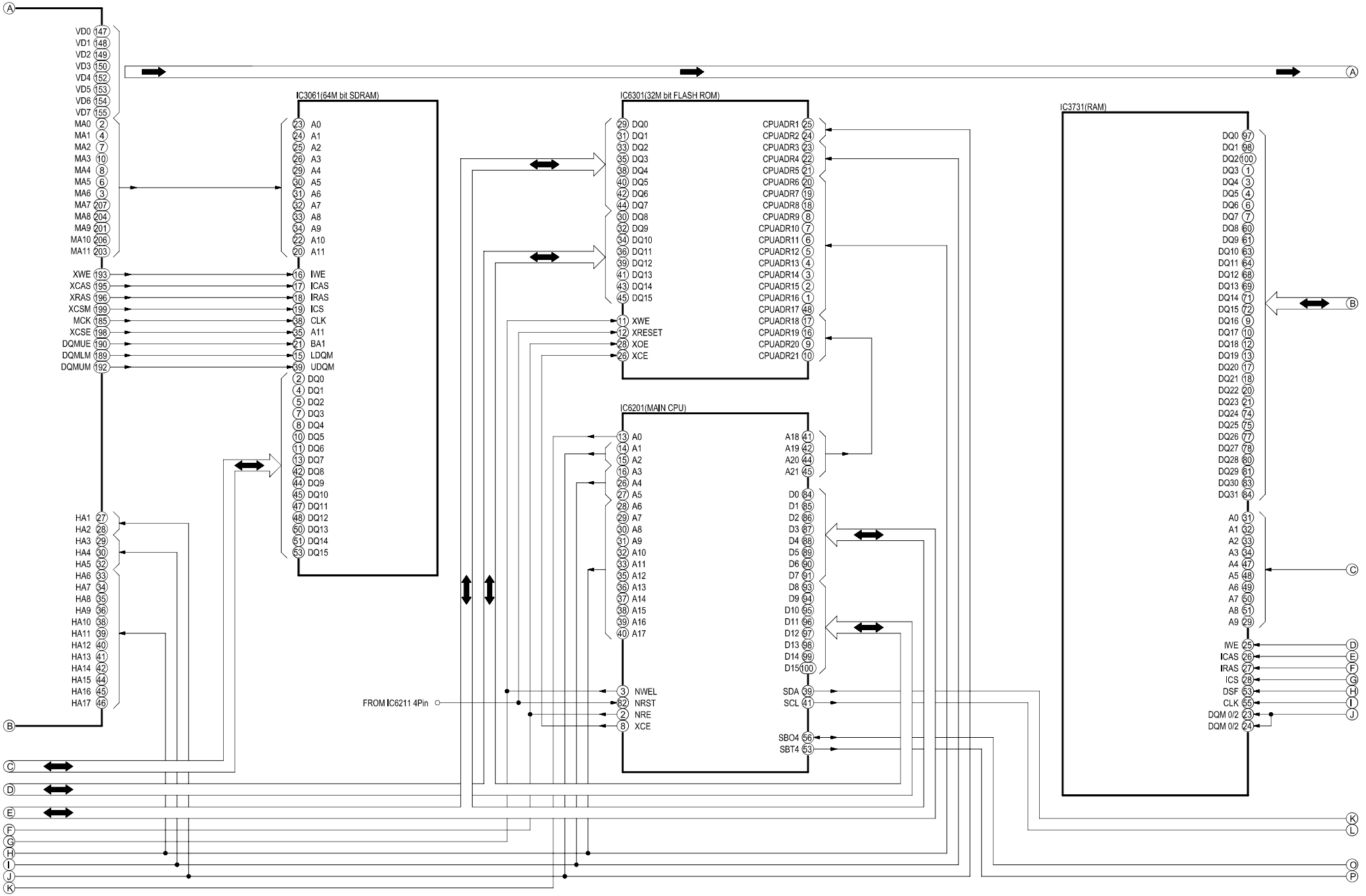
MAIN SIGNAL PATH

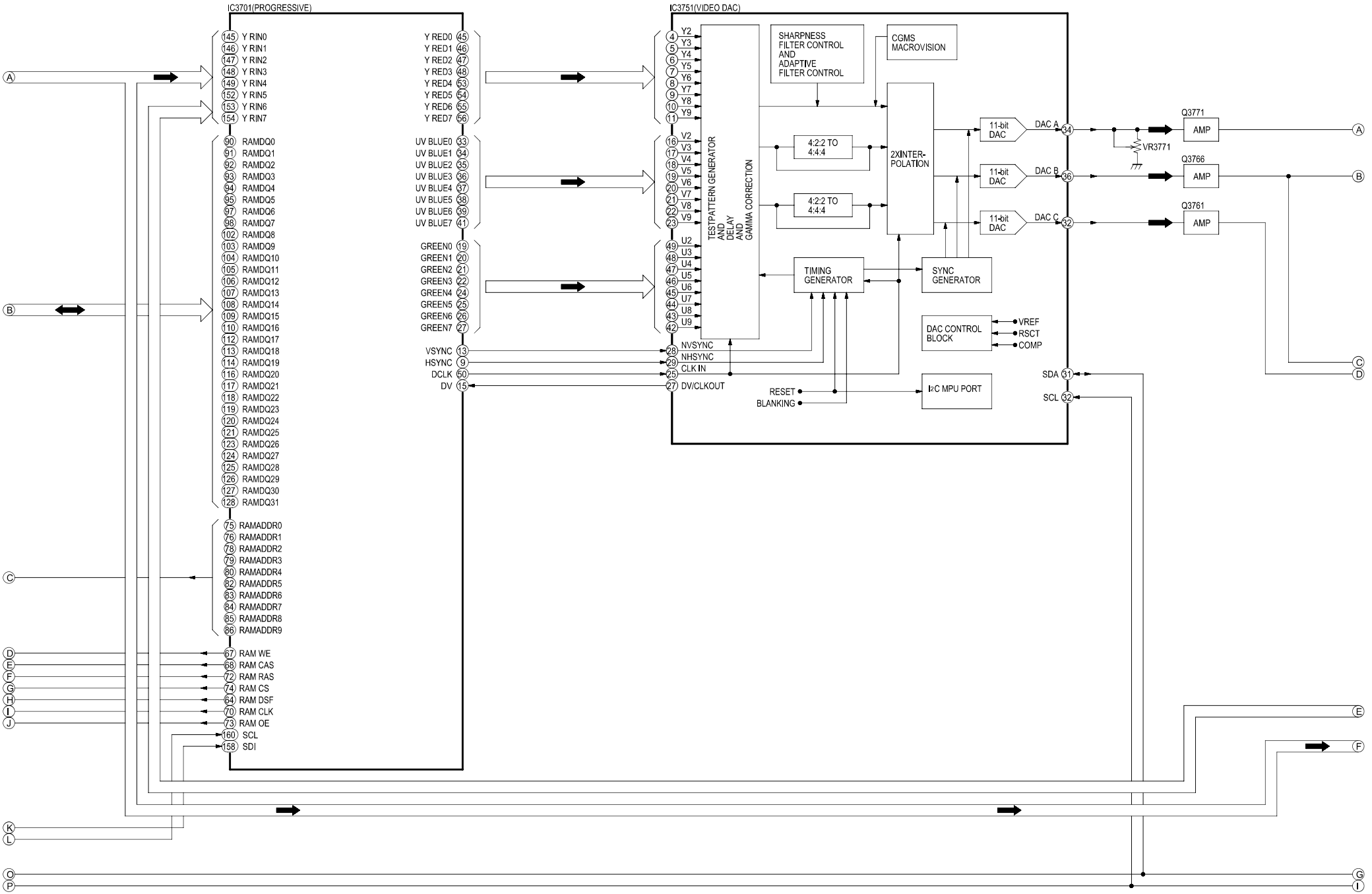


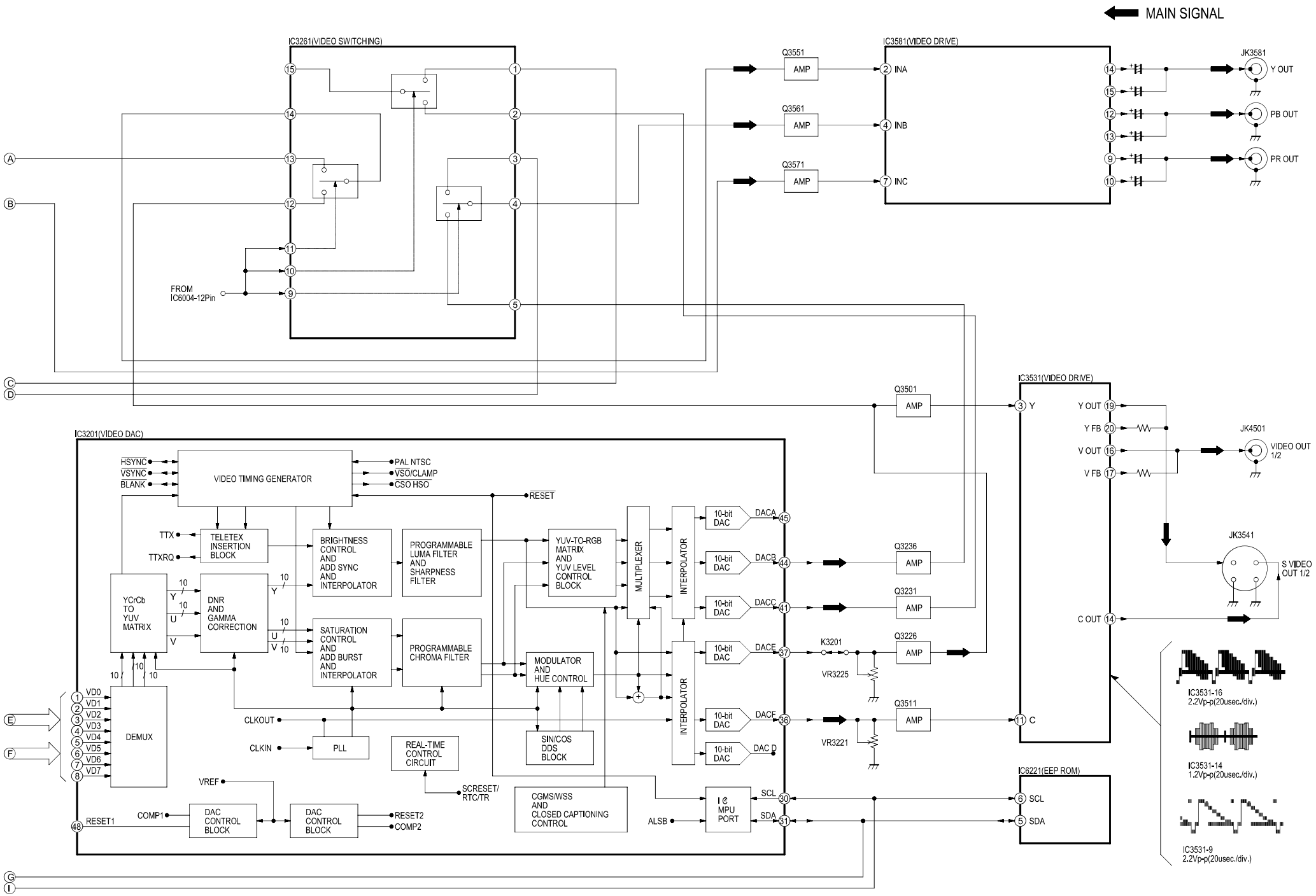
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

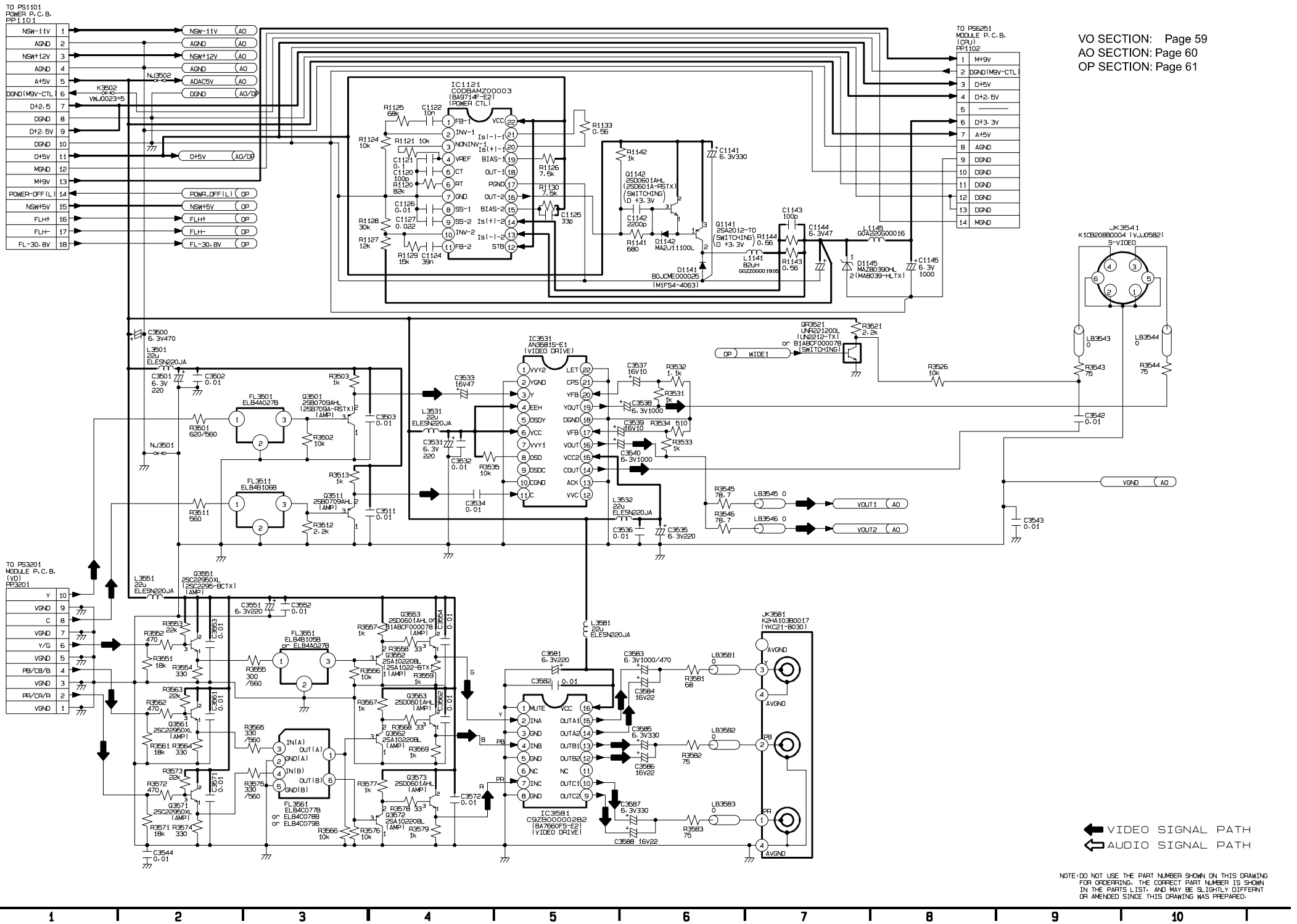

FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58
IC3201
C0ZBZ0000459
(ADV7190KST)
(INTERLACE D/A CONVERTER)
IC3751
C1AB00001401
(ADV7196AKS)
(PROGRESSIVE D/A CONVERTER)
IC3261
C0JBAP000289
(BU4053BCF-TI)
(SWITCHING)
TO PP3201
MOTHER P.C.B.
(VD)
PS3201
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.


OPTICAL PICK UP UNIT
IC5201(FEP)
VIN11
VIN12
VIN1
VIN2
VIN3
VIN4
VIN5
VIN7
VIN6
VIN8
VIN9
VIN10
TBAL
AMP
FBAL
ADD
ADD
ADD
SW
HOLD
IC2001(SODC/ODC/DRV)
AD1
AD0
AD3
AD2
CPUDR0
CPUDR1
CPUDR2
CPUDR3
CPUDR4
CPUDR5
CPUDR6
CPUDR7
CPUDR8
CPUDR9
CPUDR10
CPUDR11
CPUDR12
CPUDR13
CPUDR14
CPUDR15
CPUDR16
CPUDR17
NWR
NRD
HDD8
HDD9
HDD10
HDD11
HDD12
HDD13
HDD14
HDD15
CPUDT0
CPUDT1
CPUDT2
CPUDT3
CPUDT4
CPUDT5
CPUDT6
CPUDT7
IC6801(WM)
HA0
HA1
HA2
NHWE
NHRE
HD0
HD1
HD2
HD3
HD4
HD5
HD6
HD7
IC3001(AV DECODER)
STD0
STD1
STD2
STD3
STD4
STD5
STD6
STD7
HD8
HD9
HD10
HD11
HD12
HD13
HD14
HD15
HD0
HD1
HD2
HD3
HD4
HD5
HD6
HD7
MDQ0
MDQ1
MDQ2
MDQ3
MDQ4
MDQ5
MDQ6
MDQ7
MDQ8
MDQ9
MDQ10
MDQ11
MDQ12
MDQ13
MDQ14
MDQ15
XWR
XRD
A
B
C
D
E
F
G
H
I
J
K


IC3061(64M bit SDRAM)
IC6301(32M bit FLASH ROM)
IC6201(MAIN CPU)
IC3731(RAM)
FROM IC6211 4Pin
VD0 VD1 VD2 VD3 VD4 VD5 VD6 VD7
MA0 MA1 MA2 MA3 MA4 MA5 MA6 MA7 MA8 MA9 MA10 MA11
XWE XCAS XRAS XCSM MCK XCSE DQMUE DQMLM DQMUM
HA1 HA2 HA3 HA4 HA5 HA6 HA7 HA8 HA9 HA10 HA11 HA12 HA13 HA14 HA15 HA16 HA17
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11
IWE ICAS IRAS ICS CLK A11 BA1 LDQM UDQM
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15
XWE XRESET XOE XCE
CPUADR1 CPUADR2 CPUADR3 CPUADR4 CPUADR5 CPUADR6 CPUADR7 CPUADR8 CPUADR9 CPUADR10 CPUADR11 CPUADR12 CPUADR13 CPUADR14 CPUADR15 CPUADR16 CPUADR17 CPUADR18 CPUADR19 CPUADR20 CPUADR21
A18 A19 A20 A21
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15
NWEL NRST NRE XCE
SDA SCL
SBO4 SBT4
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7 DQ8 DQ9 DQ10 DQ11 DQ12 DQ13 DQ14 DQ15 DQ16 DQ17 DQ18 DQ19 DQ20 DQ21 DQ22 DQ23 DQ24 DQ25 DQ26 DQ27 DQ28 DQ29 DQ30 DQ31
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9
IWE ICAS IRAS ICS DSF CLK DQM 0/2 DQM 0/2

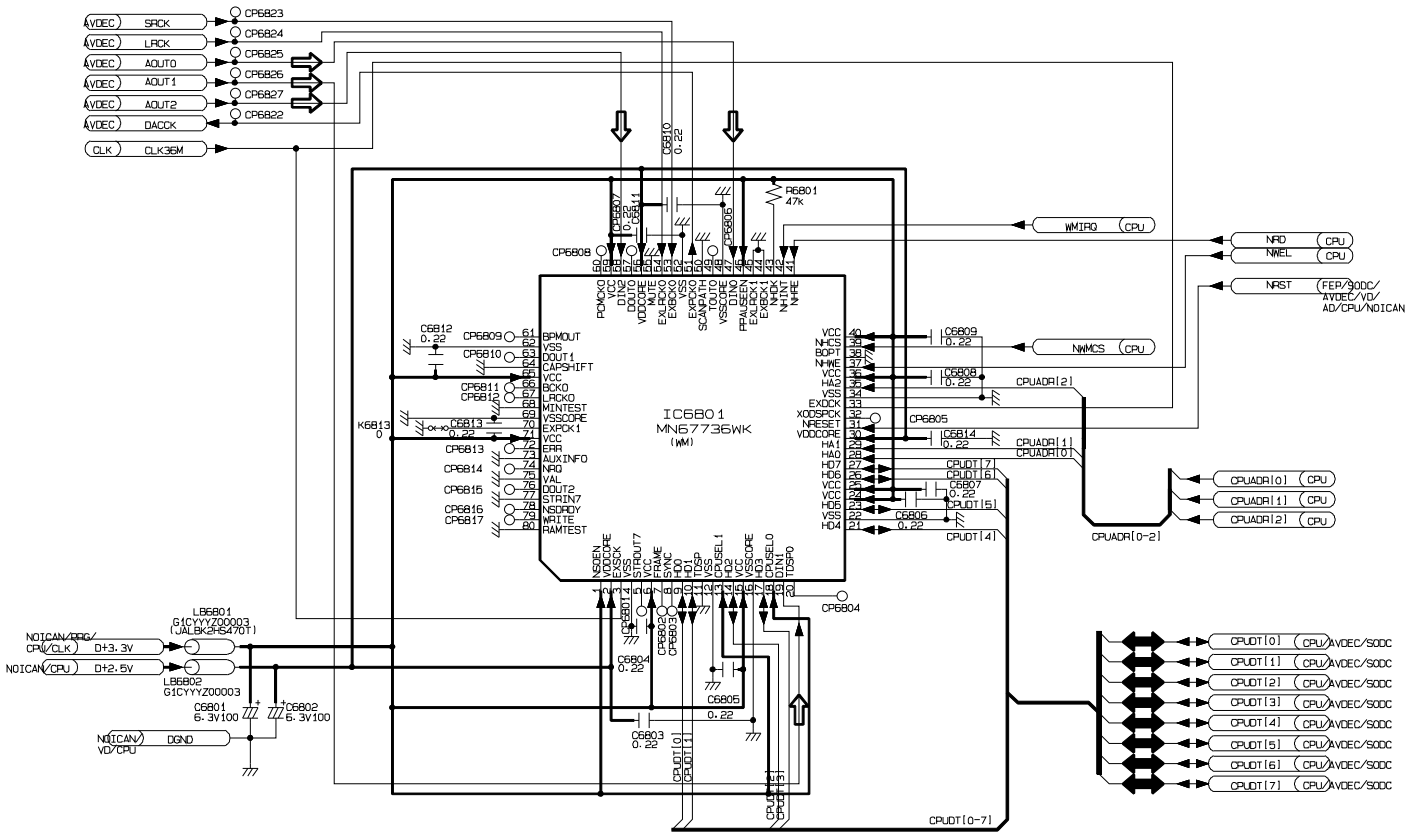

IC3701(PROGRESSIVE)
145 Y RIN0
146 Y RIN1
147 Y RIN2
148 Y RIN3
149 Y RIN4
152 Y RIN5
153 Y RIN6
154 Y RIN7
90 RAMDQ0
91 RAMDQ1
92 RAMDQ2
93 RAMDQ3
94 RAMDQ4
95 RAMDQ5
97 RAMDQ6
98 RAMDQ7
102 RAMDQ8
103 RAMDQ9
104 RAMDQ10
105 RAMDQ11
106 RAMDQ12
107 RAMDQ13
108 RAMDQ14
109 RAMDQ15
110 RAMDQ16
112 RAMDQ17
113 RAMDQ18
114 RAMDQ19
116 RAMDQ20
117 RAMDQ21
118 RAMDQ22
119 RAMDQ23
120 RAMDQ24
121 RAMDQ25
123 RAMDQ26
124 RAMDQ27
125 RAMDQ28
126 RAMDQ29
127 RAMDQ30
128 RAMDQ31
75 RAMADDR0
76 RAMADDR1
78 RAMADDR2
79 RAMADDR3
80 RAMADDR4
82 RAMADDR5
83 RAMADDR6
84 RAMADDR7
85 RAMADDR8
86 RAMADDR9
67 RAM WE
68 RAM CAS
72 RAM RAS
74 RAM CS
64 RAM DSF
70 RAM CLK
73 RAM OE
160 SCL
158 SDI
Y RED0 45
Y RED1 46
Y RED2 47
Y RED3 48
Y RED4 53
Y RED5 54
Y RED6 55
Y RED7 56
UV BLUE0 33
UV BLUE1 34
UV BLUE2 35
UV BLUE3 36
UV BLUE4 37
UV BLUE5 38
UV BLUE6 39
UV BLUE7 41
GREEN0 19
GREEN1 20
GREEN2 21
GREEN3 22
GREEN4 24
GREEN5 25
GREEN6 26
GREEN7 27
VSYNC 13
HSYNC 9
DCLK 50
DV 15
IC3751(VIDEO DAC)
4 Y2
5 Y3
6 Y4
7 Y5
8 Y6
9 Y7
10 Y8
11 Y9
16 V2
17 V3
18 V4
19 V5
20 V6
21 V7
22 V8
23 V9
49 U2
48 U3
47 U4
46 U5
45 U6
44 U7
43 U8
42 U9
28 NVSYNC
29 NHSYNC
25 CLK IN
27 DV/CLKOUT
TESTPATTERN GENERATOR AND DELAY AND GAMMA CORRECTION
SHARPNESS FILTER CONTROL AND ADAPTIVE FILTER CONTROL
CGMS MACROVISION
4:2:2 TO 4:4:4
4:2:2 TO 4:4:4
2XINTER-POLATION
TIMING GENERATOR
SYNC GENERATOR
11-bit DAC
11-bit DAC
11-bit DAC
DAC A 34
DAC B 36
DAC C 32
DAC CONTROL BLOCK
VREF
RSCT
COMP
I²C MPU PORT
RESET
BLANKING
SDA 31
SCL 32
Q3771
AMP
VR3771
Q3766
AMP
Q3761
AMP
A
B
C
D
E
F
G
H
I
J
K
L
O
P


MAIN SIGNAL
IC3261(VIDEO SWITCHING)
FROM IC6004-12Pin
Q3551 AMP
Q3561 AMP
Q3571 AMP
IC3581(VIDEO DRIVE)
INA
INB
INC
JK3581
Y OUT
PB OUT
PR OUT
Q3501 AMP
IC3531(VIDEO DRIVE)
Y
C
Y OUT
Y FB
V OUT
V FB
C OUT
JK4501
VIDEO OUT 1/2
JK3541
S VIDEO OUT 1/2
IC3201(VIDEO DAC)
HSYNC
VSYNC
BLANK
VIDEO TIMING GENERATOR
PAL NTSC
VSO/CLAMP
CSO HSO
RESET
TTX
TTXRQ
TELETEX INSERTION BLOCK
BRIGHTNESS CONTROL AND ADD SYNC AND INTERPOLATOR
PROGRAMMABLE LUMA FILTER AND SHARPNESS FILTER
YUV-TO-RGB MATRIX AND YUV LEVEL CONTROL BLOCK
MULTIPLEXER
INTERPOLATOR
10-bit DAC
DACA
DACB
DACC
DACE
DACF
DAC D
YCrCb TO YUV MATRIX
DNR AND GAMMA CORRECTION
SATURATION CONTROL AND ADD BURST AND INTERPOLATOR
PROGRAMMABLE CHROMA FILTER
MODULATOR AND HUE CONTROL
SIN/COS DDS BLOCK
DEMUX
VD0
VD1
VD2
VD3
VD4
VD5
VD6
VD7
CLKOUT
CLKIN
PLL
REAL-TIME CONTROL CIRCUIT
SCRESET/ RTC/TR
VREF
RESET1
COMP1
DAC CONTROL BLOCK
RESET2
COMP2
CGMS/WSS AND CLOSED CAPTIONING CONTROL
ALSB
I²C MPU PORT
SCL
SDA
Q3236 AMP
Q3231 AMP
Q3226 AMP
Q3511 AMP
K3201
VR3225
VR3221
IC6221(EEP ROM)
IC3531-16
2.2Vp-p(20usec./div.)
IC3531-14
1.2Vp-p(20usec./div.)
IC3531-9
2.2Vp-p(20usec./div.)


VO SECTION: Page 59
AO SECTION: Page 60
OP SECTION: Page 61
TO PS1101 POWER P.C.B. PP1101
TO PS6251 MODULE P.C.B. (CPU) PP1102
TO PS3201 MODULE P.C.B. (VD) PP3201
IC1121 C0DBAMZ00003 (BA9714F-E2) (POWER CTL)
IC3531 AN8881S-E1 (VIDEO DRIVE)
IC3581 C9ZB00000282 (BA7660FS-E2) (VIDEO DRIVE)
JK3541 K1CB208B0004 (VJJ0582) S-VIDEO
JK3581 K2HA103B0017 (YKC21-B030)
VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

FEP SECTION: Page 49
AVDEC SECTION: Page 51
PRG SECTION: Page 53
AD SECTION: Page 55
CLK SECTION: Page 57
SODC SECTION: Page 50
NOICAN SECTION: Page 52
VD SECTION: Page 54
WM SECTION: Page 56
CPU SECTION: Page 58

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH


IC6801
MN67736WK
(WM)
CPUDT[0-7]
CPUADR[0-2]
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST. AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

Ref No.	IC1101																			
MODE	A	R	K																	
STOP	0	2.5	3.3																	
PLAY	0	2.5	3.3																	
Ref No.	IC1125																			
MODE	1	2	3	4	5															
STOP	3.9	3.0	2.6	1.2	0															
PLAY	4.4	3.0	2.6	1.2	0															
Ref No.	IC1151																			
MODE	1	2	3	4	5															
STOP	0	3.0	9.9	9.1	11.8															
PLAY	0	3.0	9.9	9.1	11.8															

Ref No.	Q1021				Q1051					Q1052				Q1061				Q1062		
MODE	1	2	3		1	2	3	4		E	C	B		1	2	3		1	2	3
STOP	-46.5	114.2	-46.8		5.2	4.1	-45.9	-36.2		-46.7	-46.9	-44.9		-46.6	-46.6	-46.2		-46.6	-34.5	-44.9
PLAY	-46.3	-64.5	-46.6		5.2	4.1	-45.9	-36.2		-46.7	-46.9	-46.7		-44.3	-46.4	-46.4		-	-38.5	-46.4
Ref No.	Q1063				Q1115				Q1155											
MODE	1	2	3		1	2	3		1	2	3									
STOP	-46.7	-46.7	-46.9		5.1	5.0	0		11.8	9.2	11.7									
PLAY	-46.7	-46.9	-46.9		5.1	0	0		0	0	0									

Ref No.	QR1115				QR1155															
MODE	1	2	3		1	2	3													
STOP	0	0	3.0		0	11.7	0													
PLAY	0.2	0	0		0	0	0													

Ref No.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.3	3.3	0	3.3	3.3	0	0	1.9	2.3	2.2	2.2	2.3	2.4	2.3	2.2	2.4	1.8	0	1.8
PLAY	0	3.3	3.3	0	3.3	3.3	0	0	1.9	2.1	0	0	0	0	3.3	1.8	2.2	1.8	0	1.8
Ref No.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	2.3	2.2	3.0	2.5	3.0	2.6	3.3	3.3	3.3	3.3	0	3.3	3.3	3.3	3.3	3.2	3.2	3.2	3.2
PLAY	0	1.9	2.0	2.7	2.2	2.6	2.6	1.7	2.5	1.4	3.3	0	3.3	3.3	3.3	3.3	2.8	2.8	2.7	2.7
Ref No.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.2	3.2	3.2	2.0	1.5	0	3.2	0	3.3	3.3	3.3	0	0	0	3.3	3.3	3.3	1.8	0	0
PLAY	2.6	2.7	2.6	2.6	1.5	0	3.2	0	3.3	3.3	0	0	0	0	3.3	0	3.3	1.8	0	0
Ref No.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	3.2	3.3	0	0	1.8	2.0	1.6	1.6	3.3	0	0	0	3.3	3.3	0	1.8	0	3.3	1.5	1.5
PLAY	3.2	3.3	3.3	0	2.1	1.0	1.6	2.2	1.3	3.3	3.3	0	3.3	3.3	0	1.8	0	3.3	1.5	1.5
Ref No.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0	0	0	1.6	0	1.7	1.7	3.3	0	1.6	1.6	0	0	0	1.7	1.6	1.4	1.6	3.3	1.4
PLAY	0	0	0	1.6	0	1.7	1.7	3.3	0	1.6	1.6	0	0	0	1.7	1.6	1.4	1.6	3.3	1.4
Ref No.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	1.4	0	1.5	2.1	2.8	1.7	1.6	1.5	3.3	1.6	1.6	2.7	0	1.7	1.7	3.3	1.7	1.6	1.7	1.7
PLAY	1.4	0	1.5	2.1	2.8	1.7	1.6	1.5	3.3	1.6	1.6	2.2	0	1.7	1.7	3.3	1.7	1.6	2.1	2.5
Ref No.	IC2001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	2.3	1.7	1.7	0	3.3	0	1.2	1.3	1.3	1.3	3.3	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
PLAY	2.1	1.7	1.7	0	3.3	0	1.4	1.3	1.3	1.3	3.3	3.3	0	3.3	3.3	1.7	3.3	0	3.3	0
Ref No.	IC2001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	0	3.3	3.3	0	0	1.6	3.3	3.3	0	0	3.3	1.8	0	0	0	3.3	0	0	0	3.3
PLAY	0.4	3.3	3.3	0	0	1.6	3.3	3.3	0.9	0	0.6	1.8	0	0	0	3.3	0	1.0	0	0.9
Ref No.	IC2001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176				
STOP	0	3.3	0	0	0	3.3	0	3.3	3.3	0	0	0	0	3.3	3.3	3.3				
PLAY	0	3.3	0	0.8	0	0.7	0	1.0	3.3	0	0	0.8	0	3.3	3.3	3.3				
Ref No.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.7	1.7	1.7	1.7	1.7	0.1	0	5.0	0	0	2.9	2.9	2.9	2.9	4.4	4.4	4.4	4.4	0	3.1
PLAY	1.7	1.7	1.7	1.7	1.7	0.1	0	5.0	3.3	0	2.9	2.9	2.9	2.9	3.6	4.4	5.9	2.5	0	3.1
Ref No.	IC2501																			
MODE	21	22	23	24	25	26	27	28												
STOP	9.2	9.2	1.7	1.6	1.6	1.7	0	3.1												
PLAY	9.2	9.2	1.9	1.6	1.6	1.7	3.3	3.1												
Ref No.	IC2502																			
MODE	1	2	3	4	5															
STOP	1.7	1.7	0	0	4.9															
PLAY	1.7	1.7	0	0	4.9															

Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.3	0	1.2	0.1	1.8	1.2	0.1	1.0	0	1.2	3.3	3.4	3.3	0	1.7	1.8	3.3	3.4	2.3	0
PLAY	3.3	0	1.6	0.1	1.8	1.7	0.1	1.6	0	1.6	3.3	3.4	3.3	0	0	1.8	2.8	3.4	0	0
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	3.3	0	3.4	1.4	3.3	3.3	0	1.5	0	2.5	3.5	2.2	2.3	2.4	1.8	2.3	2.3	3.3
PLAY	3.3	3.3	3.1	3.3	3.4	1.4	0.2	2.6	1.7	3.3	0	2.1	2.7	2.2	1.9	2.2	1.8	1.9	1.8	2.1
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.3	3.3	0	2.2	2.3	2.1	2.9	3.3	3.1	3.1	3.1	3.1	0	3.1	3.1	3.1	1.8	3.1	3.2	3.1
PLAY	1.8	1.7	0	2.0	2.1	1.9	2.8	3.3	2.6	2.8	2.8	2.8	0	2.8	2.8	2.8	1.8	2.6	2.6	2.7
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	3.4	3.1	3.1	0	3.2	3.1	3.2	3.4	0	1.7	3.4	0	0	3.3	0	3.3	1.8	3.3	3.3	3.3
PLAY	3.4	2.8	2.8	0	2.9	2.9	2.9	3.3	0.5	1.7	3.4	0	0.8	0.8	0.8	1.6	1.8	1.1	1.0	1.0
Ref No.	IC3001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.3	0	1.7	0	3.4	1.6	1.7	1.7	0	0	0	0	3.4	0	1.6	1.7	1.8	0	1.8	1.5
PLAY	0.8	0	1.7	0.8	3.3	1.8	1.7	1.7	0	0.8	0	0	3.4	0	0	1.7	1.8	0	1.8	1.5
Ref No.	IC3001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	3.4	0	0	0	3.4	1.6	1.8	0	3.3	0	0	3.3	0	0	2.9	0	3.4	0	0.1	3.0
PLAY	3.4	0	0.2	0	3.4	1.6	1.8	0	3.3	0	0	3.3	0	0	2.9	0	3.3	0	0	3.3
Ref No.	IC3001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	0	3.4	0	0.1	3.4	0	0	0	0	3.3	0	0	0	0	0	1.6	0	0	0	0
PLAY	0	0	0	0.1	3.4	0	3.3	0	0	2.9	0	0	0	0	0	1.6	0	0	0	0
Ref No.	IC3001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	3.4	0	0	3.3	3.1	1.8	1.3	0.6	0.7	0.7	0	2.0	0.3	0.3	1.3	0	0	2.8	2.9	3.3
PLAY	3.4	0	0	3.3	3.1	1.8	1.3	1.2	1.3	1.3	0	1.6	1.1	1.5	1.2	3.3	0	2.2	2.9	3.3
Ref No.	IC3001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
STOP	2.6	2.8	0	2.7	2.7	3.3	3.0	2.8	0	2.8	3.1	3.3	2.7	1.8	2.9	0	2.8	2.7	3.3	2.9
PLAY	3.1	2.8	0	0	2.7	3.3	3.0	-	0	-	2.6	3.3	0	1.8	2.6	0	2.8	-	3.3	2.6
Ref No.	IC3001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
STOP	2.8	0	1.7	1.8	1.7	0	3.4	3.4	2.6	0.1	1.8	2.5	3.3	0	3.2	3.2	3.3	1.5	3.0	0
PLAY	2.8	0	1.7	1.8	1.7	0	3.4	3.4	2.2	0.2	1.8	1.9	3.3	0	3.2	3.2	3.3	1.3	3.0	0
Ref No.	IC3001																			
MODE	201	202	203	204	205	206	207	208												
STOP	0	1.8	1.2	0	0	1.1	0	0												
PLAY	0	1.8	1.4	0	3.3	0	1.5	0												
Ref No.	IC3061																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.3	2.8	0	2.7	2.8	0	2.7	3.0	3.3	2.7	2.8	0	2.8	3.3	2.5	0	3.2	3.3	3.1	1.0
PLAY	3.3	2.6	3.1	2.7	2.8	0	2.9	3.0	3.3	2.9	2.8	0	2.8	3.3	2.5	3.3	3.2	3.3	3.1	0
Ref No.	IC3061																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	0	1.1	3.3	0	1.0	1.1	1.1	1.1	0	0	1.4	0	3.3	1.7	2.4	0
PLAY	0.3	0	0	0	0.3	1.6	3.3	0	1.4	1.6	1.6	1.4	0	0	1.4	0	3.3	1.7	1.9	0
Ref No.	IC3061																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
STOP	0	2.9	3.3	2.6	2.6	0	2.6	3.0	3.3	2.4	2.4	0	2.9	0						
PLAY	0	2.9	3.3	2.8	2.7	0	2.8	2.8	3.3	2.9	2.9	0	2.2	0						
Ref No.	IC3091																			
MODE	1	2	3	4	5	6	7	8												
STOP	1.6	1.9	1.9	0	1.5	1.5	2.1	4.8												
PLAY	1.6	1.9	1.9	0	1.5	1.5	2.1	4.8												
Ref No.	IC3201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.4	0.6	0.7	0.7	2.0	0.3	0.3	1.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3
PLAY	1.4	1.3	1.3	1.1	1.6	1.2	1.6	1.2	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	3.3	3.3
Ref No.	IC3201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.3	0	0	0	3.0	3.0	0	0	1.3	1.6	0.5	0.4	3.3	0	0	0.8	0.4	3.3	0	0
PLAY	3.3	0	0	0	3.3	0	1.6	0	3.3	3.0	3.1	0	0	1.3	0.5	0.5	0.6	3.3	0	0
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0.8	0	3.3	0.8	0	1.6	1.3	1.3	3.2	3.1	3.3	0	0	3.3	0	0	0	0	0	0
PLAY	0.8	0	3.3	0.8	0	1.6	1.3	1.3	3.2	3.1	3.3	0	0	3.3	0	0	0	0	0	0
Ref No.	IC3201																			
MODE	61	62	63	64																
STOP	0	0	3.3	0																
PLAY	0	0	3.3	0																
Ref No.	IC3251																			
MODE	1	2	3	4	5	6														
STOP	4.8	0	4.8	1.3	0	3.3														
PLAY	4.8	0	4.8	1.3	0	3.3														
Ref No.	IC3261																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	1.3	1.5	1.3	1.5	1.5	0	0	0	0	0	0	1.0	1.2	1.0	1.5	4.8				
PLAY	1.3	1.5	1.3	1.5	1.5	0	0	0	0	0	0	1.2	1.4	1.2	1.5	4.8				

Ref No.	IC3701																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.4	0	3.4	0	0	0	3.4	3.4	3.1	3.4	0	2.8	3.3	3.1	0.8	0	0	0	0	0
PLAY	3.4	0	3.4	0	0	0	3.4	3.4	3.1	3.4	0	0.6	3.3	3.1	2.8	0	0	0	1.3	1.3
Ref No.	IC3701																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	3.3	0	0	0	3.3	2.3	0	0	3.4	0	1.9	0.6	0.9	0.9	0.9	0.6	0.6	3.4
PLAY	1.0	0.6	3.3	2.2	1.9	2.4	1.4	0	0	0	3.4	0	1.2	1.1	1.3	1.3	0.5	0.5	3.3	3.4
Ref No.	IC3701																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.7	0	0	0	0.9	0.5	0.5	0.5	3.4	1.6	0	0	3.3	0	0	0	0	0	3.4	0
PLAY	3.3	0	0	0	1.2	1.2	1.2	1.2	3.4	1.6	0	0	2.0	0.9	2.1	0.2	0	0	3.4	0
Ref No.	IC3701																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	1.6	3.4	0	0	3.4	0	3.3	3.3	0	1.6	3.4	3.3	0.7	0	1.5	1.7	0	1.7	1.7	1.7
PLAY	1.6	3.4	0	0	3.4	0	3.3	3.3	0	1.6	3.4	3.3	0.7	0	0.6	1.7	0	1.7	1.7	1.7
Ref No.	IC3701																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.4	1.7	1.6	1.7	1.8	2.2	0	0	3.3	1.1	0.9	2.1	2.1	2.1	0.9	3.4	0.9	1.4	0	0
PLAY	3.4	1.7	1.6	1.7	2.1	2.2	3.3	0	0	1.1	1.7	2.4	2.2	2.3	1.3	3.4	1.3	1.2	0	0
Ref No.	IC3701																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	3.4	1.0	0.9	0.9	0.9	1.6	1.9	1.9	1.8	2.7	0	1.8	2.1	2.0	3.4	2.0	1.8	1.6	3.0	2.2
PLAY	3.4	1.2	1.2	1.2	1.2	1.3	2.4	2.6	1.1	2.2	0	2.2	2.4	2.0	3.4	2.8	2.5	2.6	1.9	2.2
Ref No.	IC3701																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	1.8	0	1.8	1.8	1.7	1.6	1.6	1.5	2.0	3.4	0	0	0	0	0	0	0	0	0	0
PLAY	2.2	0	2.2	2.2	2.4	2.6	2.6	1.7	2.0	3.4	0	0	0	0	0	0	0	0	0	0
Ref No.	IC3701																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
STOP	0	0	0	0	0	0.6	0.7	0.7	-	0	3.4	0.3	0.3	-	0	3.4	1.6	2.9	2.9	2.9
PLAY	0	0	0	0	0	1.3	1.1	1.2	1.6	0	3.4	1.3	1.4	1.2	0	3.4	1.6	2.9	2.9	2.9
Ref No.	IC3731																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.4	3.3	1.4	1.2	0	1.2	2.3	3.3	2.6	1.7	0	1.9	1.9	3.3	3.3	0	1.9	1.8	0	1.7
PLAY	1.2	3.3	1.6	1.6	0	1.6	1.9	3.3	2.2	2.2	0	2.0	2.0	3.3	3.3	0	2.2	1.8	0	2.1
Ref No.	IC3731																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	2.8	3.3	0.6	0.6	3.3	3.3	3.3	3.3	0	2.2	0	1.6	1.6	1.6	1.6	3.3	0	0	0	0
PLAY	2.5	3.3	0.6	0.6	3.3	3.3	3.3	3.3	0	2.2	0	1.6	1.6	1.6	1.6	3.3	0	0	0	0
Ref No.	IC3731																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0	0	0	0	1.6	1.7	1.7	1.7	2.1	0	0	3.3	0	0.6	0	1.7	3.3	1.0
PLAY	0	0	0	0	0	0	1.6	1.7	1.7	1.7	2.1	0	0	3.3	1.6	0.6	0	1.7	3.3	1.6
Ref No.	IC3731																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0.9	0.9	3.3	0	3.3	0	0	0	0	0.9	3.3	0	1.7	0	0	0	3.3	3.1
PLAY	1.6	0	1.6	1.6	3.3	0	3.3	1.9	1.7	0	2.3	0.9	3.3	2.2	2.2	0	2.2	2.2	3.3	2.4
Ref No.	IC3731																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	1.5	0	1.5	1.4	0	0	0	0	0	0	0	0	0	0	0	3.3	1.4	0.9	0	2.2
PLAY	2.2	0	2.9	1.7	0	0	0	0	0	3.3	3.3	0	0	0	0	3.3	1.6	1.7	0	1.7
Ref No.	IC3751																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	0.9	0.5	0.5	0.5	3.3	0.1	0.1	0	3.5	0	0	0	1.8	0.8	1.1	1.8	0
PLAY	3.3	0	0	1.2	1.2	1.2	1.3	2.2	1.3	2.1	0.2	3.5	0	0	0	1.3	1.3	1.3	1.2	0.5
Ref No.	IC3751																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.2	1.2	1.2	3.3	1.6	0	2.6	3.3	3.1	3.0	3.0	0.6	0	0.4	3.3	0.6	1.7	1.6	1.6	3.2
PLAY	0.5	0.5	3.2	3.3	1.6	0	2.6	3.3	3.1	3.0	3.0	0.5	0	0.7	3.3	0.6	1.7	1.6	1.6	3.2
Ref No.	IC3751																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52								
STOP	3.3	3.3	0	0.1	0.3	0.6	0.7	0.5	0	0	0	0.1								
PLAY	3.3	0	0	0.1	0	0	0.1	0	0	0	0	0.1								
Ref No.	IC3781							IC4201												
MODE	1	2	3	4	5	6		1	2	3										
STOP	4.8	0	4.8	1.3	0	3.3		0	3.3	4.7										
PLAY	4.8	0	4.8	1.3	0	3.3		0	3.3	4.7										
Ref No.	IC4211																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.7	0	1.6	0	1.5	0	3.3	0	0	4.7	0	2.3	2.4	0	4.7	2.4	2.3	0	4.7	0
PLAY	1.7	0.8	1.6	0	1.5	0	3.3	0	0	4.7	0	2.3	2.4	0	4.7	2.4	2.3	0	4.7	0
Ref No.	IC4211																			
MODE	21	22	23	24	25	26	27	28												
STOP	0	3.2	3.3	3.3	0	3.3	2.8	3.3												
PLAY	0	3.2	0	0	0	3.3	2.8	3.3												
Ref No.	IC4221																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.7	0	1.6	1.9	1.5	3.7	0	4.7	4.7	0	2.3	0	2.3	0	4.7	2.4	0	2.3	0	4.7
PLAY	1.7	0.8	1.6	1.9	1.5	3.7	0	4.7	4.7	0	2.3	0	2.3	0	4.7	2.4	0	2.3	0	4.7
Ref No.	IC4221																			
MODE	21	22	23	24	25	26	27	28												
STOP	0	3.2	0	4.7	4.8	3.3	2.8	3.3												
PLAY	4.9	3.2	0	4.7	4.6	3.3	2.8	3.3												

Ref No.	IC4231																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.7	0	1.6	1.9	1.5	3.6	0	4.7	4.7	0	2.3	0	2.4	0	4.7	2.4	0	2.3	0	4.7
PLAY	1.7	0	1.6	1.9	1.5	3.6	0	4.7	4.7	0	2.3	0	2.4	0	4.7	2.4	0	2.3	0	4.7
Ref No.	IC4231																			
MODE	21	22	23	24	25	26	27	28												
STOP	0	3.2	0	4.7	4.7	3.3	2.8	3.3												
PLAY	0	3.2	0	4.7	4.7	3.3	2.8	3.3												
Ref No.	IC4241																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.7	0	1.6	1.9	1.5	3.6	0	4.7	4.7	0	2.3	0	2.4	0	4.7	2.4	0	2.3	0	4.7
PLAY	1.7	0	1.6	1.9	1.5	3.6	0	4.7	4.7	0	2.3	0	2.4	0	4.7	2.4	0	2.3	0	4.7
Ref No.	IC4241																			
MODE	21	22	23	24	25	26	27	28												
STOP	0	3.2	0	4.7	4.7	3.3	2.8	3.3												
PLAY	0	3.2	0	4.7	4.7	3.3	2.8	3.3												
Ref No.	IC4261																			
MODE	1	2	3	4	5	6	7	8												
STOP	0	0	0	0	0	0	0	5.0												
PLAY	4.9	0	4.9	0	0	4.9	4.9	4.9												
Ref No.	IC5201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.4	0	4.4	0	1.7	1.7	1.7	3.3	0	3.2	3.3	0	0	1.2	1.7	1.7	1.7	1.7	1.7
PLAY	0.5	3.2	0	4.4	0	1.7	1.7	2.0	3.3	0	3.2	3.3	0	0	1.2	1.7	1.7	1.7	1.7	2.1
Ref No.	IC5201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.7	1.7	2.7	0	1.7	0	2.2	4.8	1.7	1.8	1.8	2.1	0	2.1	1.5	3.3	1.2	0	3.3	0
PLAY	1.7	1.7	2.7	0	1.7	0	2.2	4.8	1.7	1.8	1.8	2.1	0	2.1	1.5	3.3	1.2	0	0	0
Ref No.	IC5201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	1.7	1.6	1.6	1.1	1.7	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.3	4.8	2.2	2.2	2.2	2.2	2.2
PLAY	2.5	1.4	1.8	2.2	1.9	2.2	2.2	2.2	2.2	2.1	2.2	2.1	2.2	2.3	4.8	2.2	2.2	2.2	2.2	2.2
Ref No.	IC5201																			
MODE	61	62	63	64																
STOP	0	2.2	2.2	0																
PLAY	0	2.2	2.2	0																
Ref No.	IC5262																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.2	2.2	2.2	0	2.2	2.2	2.2	4.9												
PLAY	2.2	2.2	2.2	0	2.2	2.2	2.2	4.9												
Ref No.	IC5263																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	1.7	2.2	2.2	2.2	0	0	0	3.3	0	0.2	1.1	1.1	1.7	4.9	4.9				
PLAY	0	0	0	0	0	0	0	0	3.3	0	0	2.2	0.1	2.2	2.0	4.9				
Ref No.	IC5266									IC5267										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	1.7	4.2	0	0	1.1	0	0	4.8		1.7	0	0	0	1.0	0	0	4.9			
PLAY	0	0	0	0	0	0	0	4.8		1.9	1.8	0	0	0	0	0	0			
Ref No.	IC6201																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.3	3.1	3.3	3.3	3.3	3.3	3.3	3.0	3.3	0	0	3.3	2.1	3.0	3.0	2.8	3.3	1.3	0	0
PLAY	3.3	2.7	3.3	3.3	3.3	3.3	3.3	2.5	0	0	0	0.1	1.4	2.6	1.7	1.4	3.3	1.3	0	0
Ref No.	IC6201																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.3	3.3	1.5	1.8	3.3	3.0	2.5	3.0	2.2	2.3	2.4	2.2	2.2	3.3	2.4	2.2	1.7	0	0	0
PLAY	3.3	3.3	1.5	1.8	3.3	2.6	2.1	0	0	1.9	2.4	1.9	2.0	3.3	2.2	1.8	1.7	2.0	2.1	1.9
Ref No.	IC6201																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0.5	0	0	0	0	0	0	3.3	3.3	3.3	3.3	2.1	3.3	3.3	3.3	0	0	3.3
PLAY	1.8	1.4	0.5	0	1.4	0	0	0	0	3.0	1.1	2.8	3.0	1.9	3.3	3.0	3.3	0	0	3.3
Ref No.	IC6201																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	0	0	3.3	3.3	3.3	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0.1	0	0
PLAY	0	0	0	0	0	3.3	3.3	0	0	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.9	3.3	3.3
Ref No.	IC6201																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.3	3.3	3.3	3.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
PLAY	3.3	3.3	3.3	3.4	0.4	0.4	0	1.2	0.4	0.4	0.3	0	0	3.3	3.3	3.3	3.3	3.3	3.3	3.3
Ref No.	IC6211						IC6221													
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8						
STOP	0	0	0	3.3	3.3		0	0	0	0	3.0	3.0	0	3.3						
PLAY	0	0	0	3.3	3.3		0	0	0	0	3.0	3.0	0	3.3						
Ref No.	IC6301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.2	2.2	2.1	2.2	2.4	2.2	2.2	2.5	2.0	2.0	3.3	3.3	0	3.3	2.0	2.0	2.3	2.3	2.2	3.0
PLAY	2.2	2.0	1.7	1.7	2.1	1.9	1.9	2.2	1.4	1.4	2.6	3.3	0	3.3	3.3	1.3	1.7	1.9	2.2	2.7
Ref No.	IC6301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	2.5	3.0	2.8	3.0	3.0	3.0	0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.0	3.3	3.0	3.1	3.0
PLAY	2.1	2.6	2.6	2.5	2.5	2.8	0	2.7	2.7	2.6	2.6	2.6	2.7	2.7	2.7	2.7	3.3	2.7	2.8	2.6
Ref No.	IC6301																			
MODE	41	42	43	44	45	46	47	48												
STOP	3.0	3.0	3.1	3.1	3.1	0	3.3	2.0												
PLAY	2.6	2.7	2.8	2.8	2.8	0	3.3	1.9												

Ref No.	IC6501						IC6511						IC6521							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5			
STOP	0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2			
PLAY	0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2			
Ref No.	IC6531						IC6541													
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8						
STOP	0	1.6	0	1.6	3.2		1.5	1.5	1.5	0	1.5	3.2	3.2	3.2						
PLAY	0	1.6	0	1.6	3.2		1.5	1.5	1.5	0	1.5	3.2	3.2	3.2						
Ref No.	IC6551								IC6561											
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5						
STOP	1.5	1.5	1.6	0	1.4	0	0	3.2		0	1.6	0	1.6	3.2						
PLAY	1.5	1.5	1.6	0	1.4	0	0	3.2		0	1.6	0	1.6	3.2						
Ref No.	IC6571						IC6581						IC6591							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5			
STOP	0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2		0	1.6	0	1.5	3.2			
PLAY	0	1.6	0	1.6	3.2		0	1.6	0	1.6	3.2		0	1.6	0	1.5	3.2			
Ref No.	IC6801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.4	2.5	1.6	0	0	3.3	0	0	3.1	3.0	0	0	3.4	3.1	3.4	0	3.3	3.4	0	0
PLAY	3.4	2.5	1.5	0	0	3.3	0	0	2.7	2.7	0	0	0	2.7	3.4	0	3.3	3.4	0	0
Ref No.	IC6801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	3.1	0	3.1	3.4	3.4	3.1	3.2	2.1	3.3	2.5	3.2	1.7	1.6	0	3.3	3.4	3.3	0	3.3	3.4
PLAY	2.8	0	2.8	3.4	3.4	2.8	2.2	1.6	2.6	2.5	2.0	1.7	1.6	0	1.7	3.4	3.3	0	0.8	3.4
Ref No.	IC6801																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.1	3.3	3.3	0	0	3.4	3.3	0	0	0	1.6	0	1.7	1.7	0	2.5	0	0	3.4	1.6
PLAY	0.6	3.3	3.3	0	0	3.4	0.8	0	0	0	1.6	0	1.7	1.7	0	2.5	0	0	3.4	1.6
Ref No.	IC6801																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	3.4	0	0	0	3.4	0	0	0	0	0	3.4	3.4	0	0	0	0	0	3.4	0	0
PLAY	3.4	0	0	0	3.4	0	0	0	0	0	3.4	0	3.3	3.3	0	0	0	3.4	1.4	0

Ref No.	Q2001				Q3221				Q3226				Q3231				Q3236			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
STOP	1.5	2.1	4.8		1.1	0.5	0		1.0	0.4	0		1.5	0.8	0		1.5	0.8	0	
PLAY	1.5	2.1	4.8		1.1	0.5	0		1.2	0.6	0		1.5	0.8	0		1.5	0.8	0	
Ref No.	Q3761				Q3766				Q3771				Q5211				Q5215			
MODE	E	C	B		E	C	B		E	C	B		1	2	3		1	2	3	
STOP	1.3	0.6	0		1.3	0.6	0		1.2	0.4	0		4.3	4.8	1.7		4.4	4.8	1.1	
PLAY	1.3	0.6	0		1.3	0.6	0		1.4	0.6	0		3.2	3.8	2.2		4.4	4.8	1.1	
Ref No.	Q5261				Q5262				Q5263				Q5264				Q5271			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		1	2	3	
STOP	1.1	1.8	4.8		1.1	1.8	4.8		1.6	0.9	0		0.5	1.1	4.8		0	3.3	0	
PLAY	1.1	1.8	4.8		1.1	1.8	4.8		1.8	1.1	0		0.3	1.1	4.8		0	3.3	0	
Ref No.	Q6215																			
MODE	E	C	B																	
STOP	0	0	3.2																	
PLAY	0	0	3.2																	

Ref No.	QR5221				QR5241															
MODE	1	2	3		1	2	3													
STOP	3.3	3.3	0.4		3.3	3.3	0													
PLAY	3.3	0.1	3.3		3.3	0.1	3.3													

Ref No.	IC1121																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.3	0	2.4	2.4	1.8	1.3	0	0.6	3.0	2.4	1.9	5.0	3.4	3.5	4.1	2.0	0	0	4.0	4.9
PLAY	2.3	0	2.4	2.4	1.8	1.3	0	0.6	3.0	2.4	1.9	5.0	3.4	3.5	4.1	1.8	0	0	4.0	4.9

Ref No.	IC1121																			
MODE	21	22																		
STOP	4.9	5.0																		
PLAY	4.9	5.0																		

Ref No.	IC3531																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.1	0	2.4	4.9	2.1	4.9	2.1	4.9	2.0	0	2.0	2.0	0	2.4	4.9	2.1	1.6	0	2.0	1.7
PLAY	2.1	0	2.4	4.9	2.1	4.9	2.1	4.9	2.0	0	2.0	2.0	0	2.4	4.9	2.3	1.6	0	2.3	1.7

Ref No.	IC3531																			
MODE	21	22																		
STOP	0	0																		
PLAY	0	0																		

Ref No.	IC3581																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	0.6	0	0.9	0	0	0.9	0	2.7	2.8	0	2.7	2.8	1.9	2.0	4.9				
PLAY	0	0.6	0	0.9	0	0	0.9	0	2.7	2.8	0	2.7	2.8	2.2	2.2	4.9				

Ref No.	IC4301									IC4302										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.2	0	0	0	8.4			
PLAY	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.2	0	0	0	8.4			

Ref No.	IC4321									IC4341										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.2	0	0	0	8.4			
PLAY	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.2	0	0	0	8.4			
Ref No.	IC4361									IC4701										
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			
STOP	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.8	0	0	0	9.0			
PLAY	0	0	0	-8.2	0	0	0	8.4		0	0	0	-8.8	0	0	0	9.0			
Ref No.	IC4751					IC4752				IC4781										
MODE	1	2	3	4	5	1	2	3	4	5	1	2	3							
STOP	5.0	1.7	0	2.5	5.0	5.0	1.7	0	2.5	5.0	0	5.0	1.7							
PLAY	5.0	1.7	0	2.5	5.0	5.0	1.7	0	2.5	5.0	0	5.0	1.7							
Ref No.	IC4901																			
MODE	1	2	3	4	5															
STOP	10.2	3.1	9.1	0	0															
PLAY	10.2	3.1	9.1	0	0															
Ref No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.2	0	3.2	3.2	1.0	2.8	3.0	3.2	1.6	1.6	0	0	3.2	0	0	3.2	3.2	0.7	3.2	3.2
PLAY	3.2	0	3.0	1.0	2.8	3.0	0	3.2	1.6	1.6	0	0	3.2	0	0	3.2	3.2	0.7	3.2	3.2
Ref No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	1.5	3.2	0	3.2	1.6	1.6	3.1	3.1	3.1	0	3.2	3.3	3.2	1.7	3.2	3.3	3.0	3.1
PLAY	0	0	1.5	1.5	0	3.2	1.6	1.6	3.1	3.1	3.1	0.2	3.2	3.3	3.2	0	3.2	3.3	3.0	3.1
Ref No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.9	3.2	3.2	0	0	0	3.1	3.1	3.1	2.9	-27.2	-27.2	-27.2	-27.2	-27.0	-27.0	-27.0	-27.0	-27.0	-27.0
PLAY	2.9	3.2	3.2	0	0	0	3.1	3.1	3.1	2.9	-27.6	-27.6	-27.6	-27.6	-27.4	-27.4	-27.4	-27.4	-27.4	-27.4
Ref No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	-26.9	-26.9	-27.1	-24.0	-29.3	-8.7	-16.2	-16.2	-26.6	-18.7	-18.7	-23.9	-26.9	-19.2	-16.7	-19.2	-26.9	-26.9	-19.2	-19.2
PLAY	-27.4	-27.4	-27.4	-27.4	-29.8	-8.9	-14.0	-19.0	-24.4	-21.6	-21.6	-24.4	-27.3	-22.1	-17.1	-19.6	-27.0	-27.0	-22.0	-22.0
Ref No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	-21.8	-24.2	-26.9	-16.7	-16.7	-24.4	-29.4	-29.9	-19.2	-16.7	-21.7	-19.2	-24.4	-16.6	-26.8	-11.7	-16.7	-16.7	-29.4	-29.5
PLAY	-19.5	-27.0	-27.0	-17.0	-20.0	-24.6	-29.9	-27.3	-22.0	-22.1	-22.1	-17.0	-24.8	-19.6	-27.4	-9.5	-17.0	-19.5	-29.9	-30.0
Ref No.	IC6002																			
MODE	1	2	3	4																
STOP	0	0	3.2	3.2																
PLAY	0	0	3.2	3.2																
Ref No.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	0	0	0	0	3.5	3.5	3.4	0	2.0	0	3.1	0	0	2.9	2.9	3.2				
PLAY	0	0	0	0	3.5	3.5	3.4	0	2.0	0	3.1	0	0	2.9	2.9	3.2				

Ref No.	Q1141				Q1142				Q3501				Q3511				Q3551			
MODE	1	2	3		1	2	3		1	2	3		1	2	3		1	2	3	
STOP	5.0	4.4	3.6		4.4	4.1	5.0		1.6	1.1	0		0.7	0	0		0.4	1.1	4.9	
PLAY	5.0	4.4	3.6		4.4	4.1	5.0		1.8	1.1	0		0.7	0	0		0.6	1.3	4.9	
Ref No.	Q3552				Q3553				Q3561				Q3562				Q3563			
MODE	1	2	3		1	2	3		1	2	3		1	2	3		1	2	3	
STOP	1.3	0.4	0		0.5	1.3	4.9		0.8	1.5	4.9		1.5	0.8	0		0.9	1.5	4.9	
PLAY	1.3	0.6	0		0.7	1.3	4.9		0	1.5	4.9		1.5	0.8	0		0.9	1.5	4.9	
Ref No.	Q3571				Q3572				Q3573				Q4381				Q4501			
MODE	1	2	3		1	2	3		1	2	3		E	C	B		1	2	3	
STOP	0.8	1.5	4.9		1.5	0.8	0		0.9	1.5	4.9		0	0	0		0	0.7	0	
PLAY	0.8	1.5	4.9		1.5	0.8	0		0.9	1.5	4.9		0	0	0		0	-4.3	0	
Ref No.	Q4511				Q4521				Q4531				Q4541				Q4551			
MODE	1	2	3		1	2	3		1	2	3		1	2	3		1	2	3	
STOP	0	0.7	0		0	0.7	0		0	0.7	0		0	0.7	0		0	0.7	0	
PLAY	0	-4.3	0		0	-4.3	0		0	-4.3	0		0	-4.3	0		0	-4.3	0	
Ref No.	Q4561				Q4571				Q4591				Q4901				Q4911			
MODE	1	2	3		1	2	3		E	C	B		1	2	3		1	2	3	
STOP	0	0.7	0		0	0.7	0		0	0	0		9.1	8.4	9.0		-9.4	-10.3	-8.8	
PLAY	0	-4.3	0		0	-4.3	0		0	0	4.1		9.1	8.4	9.0		-9.4	-10.3	-8.8	
Ref No.	Q4912				Q4913				Q4921				Q4931				Q6001			
MODE	1	2	3		1	2	3		1	2	3		S	G	D		E	C	B	
STOP	-0.6	-9.5	0		-9.5	-8.8	-9.5		8.4	8.9	9.0		-8.3	-8.8	-8.8		-21.5	-22.2	-22.2	
PLAY	-0.6	-9.5	0		-9.5	-8.8	-9.5		8.4	8.9	9.0		-8.3	-8.8	-8.8		-22.0	-22.7	-22.8	
Ref No.	Q6071																			
MODE	E	C	B																	
STOP	3.9	4.9	3.2																	
PLAY	3.9	4.9	3.2																	

Ref No.	QR3521				QR3522				QR3591				QR3592							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
STOP	0	3.1	0		0	3.1	0		0	3.1	0		0	3.1	0					
PLAY	0	3.1	0		0	3.1	0		0	3.1	0		0	3.1	0					
Ref No.	QR4201				QR4202				QR4381				QR4382				QR4591			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
STOP	9.0	9.0	0		0	0	9.0		0	3.3	0		0	0	0		0	3.3	0	
PLAY	9.0	9.0	0		0	0	9.0		0	0	0		0	0	0		0	0	4.1	
Ref No.	QR4593				QR4594				QR6003											
MODE	E	C	B		E	C	B		E	C	B									
STOP	0	0	2.0		2.0	0	1.3		0	0	3.6									
PLAY	0	4.1	0.1		0.1	0	4.3		0	0	3.6									

Ref No.	IC4731																			
MODE	1	2	3	4	5	6	7	8												
STOP	0	0	0	-8.8	0	0	0	9.0												
PLAY	0	0	0	-8.8	0	0	0	9.0												
Ref No.	IC6101																			
MODE	1	2	3																	
STOP	3.2	3.2	0																	
PLAY	3.2	3.2	0																	

Ref No.	Q4721				Q4722															
MODE	E	C	B		E	C	B													
STOP	0	0.7	0		0	0.7	0													
PLAY	0	-4.3	0		0	-4.3	0													

16.1. INTERCONNECTION SCHEMATIC DIAGRAM

16.2. POWER SUPPLY SCHEMATIC DIAGRAM

16.3. FEP SECTION (MODULE P.C.B. (1/10)) SCHEMATIC DIAGRAM

16.4. SODC SECTION (MODULE P.C.B. (2/10)) SCHEMATIC DIAGRAM

16.5. AV DECODER SECTION (MODULE P.C.B. (3/10)) SCHEMATIC DIAGRAM

16.6. NOISE CANCELER SECTION (MODULE P.C.B. (4/10)) SCHEMATIC DIAGRAM

16.7. PROGRESSIVE SECTION (MODULE P.C.B. (5/10)) SCHEMATIC DIAGRAM

16.8. VIDEO D/A CONVERTER SECTION (MODULE P.C.B. (6/10)) SCHEMATIC DIAGRAM

16.9. AUDIO D/A CONVERTER SECTION (MODULE P.C.B. 7/10)) SCHEMATIC DIAGRAM

16.10. WM SECTION (MODULE P.C.B. 8/10)) SCHEMATIC DIAGRAM

16.11. CLOCK SECTION (MODULE P.C.B. 9/10)) SCHEMATIC DIAGRAM

16.12. CPU SECTION (MODULE P.C.B. 10/10)) SCHEMATIC DIAGRAM

16.13. VIDEO OUT SECTION (MOTHER P.C.B. 1/3)) SCHEMATIC DIAGRAM

16.14. AUDIO OUT SECTION (MOTHER P.C.B. 2/3)) SCHEMATIC DIAGRAM

16.15. OPERATION SECTION (MOTHER P.C.B. 3/3)) SCHEMATIC DIAGRAM

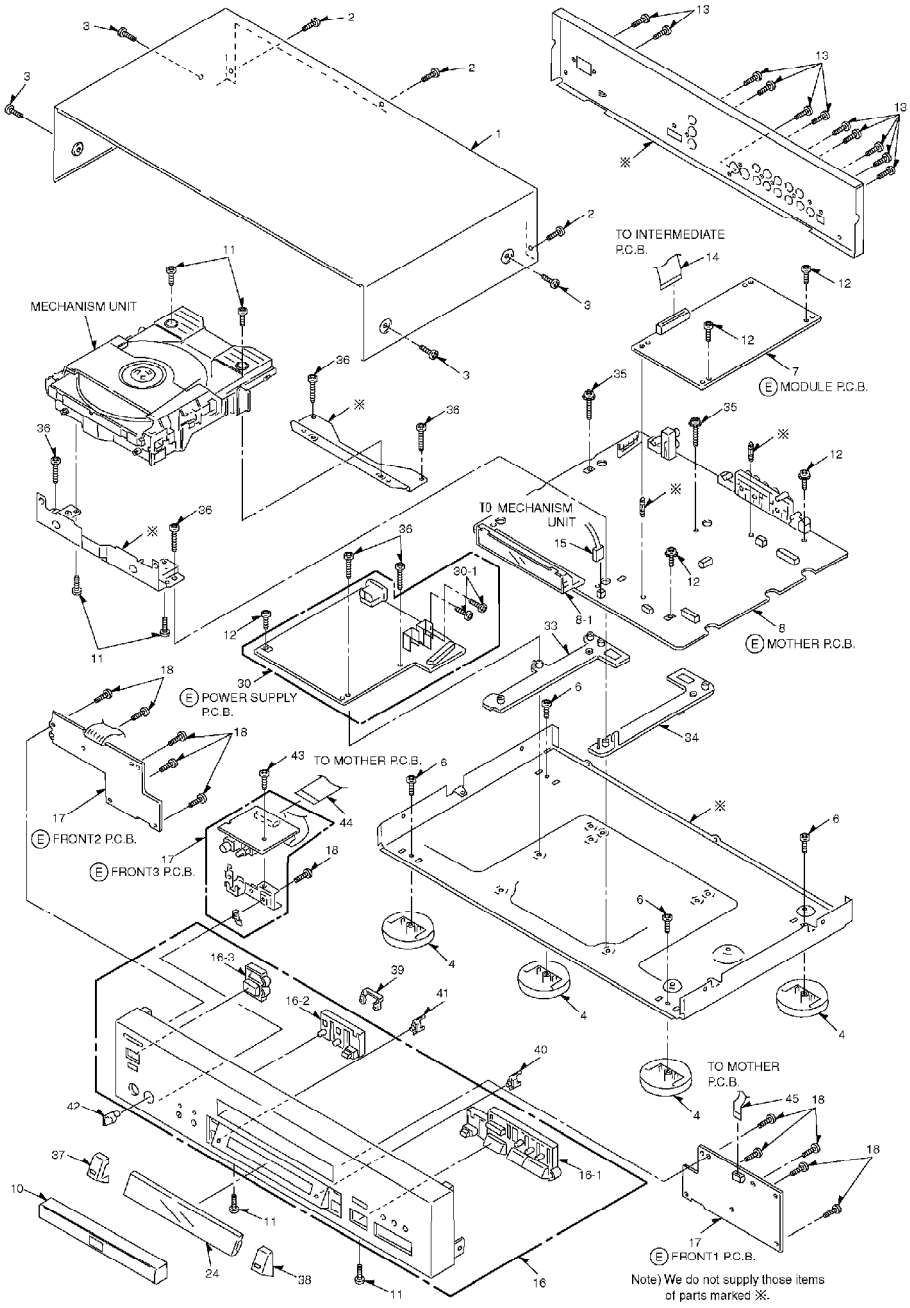
16.16. TERMINAL SCHEMATIC DIAGRAM

16.17. FRONT1 AND FRONT2 AND FRONT3 SCHEMATIC DIAGRAM

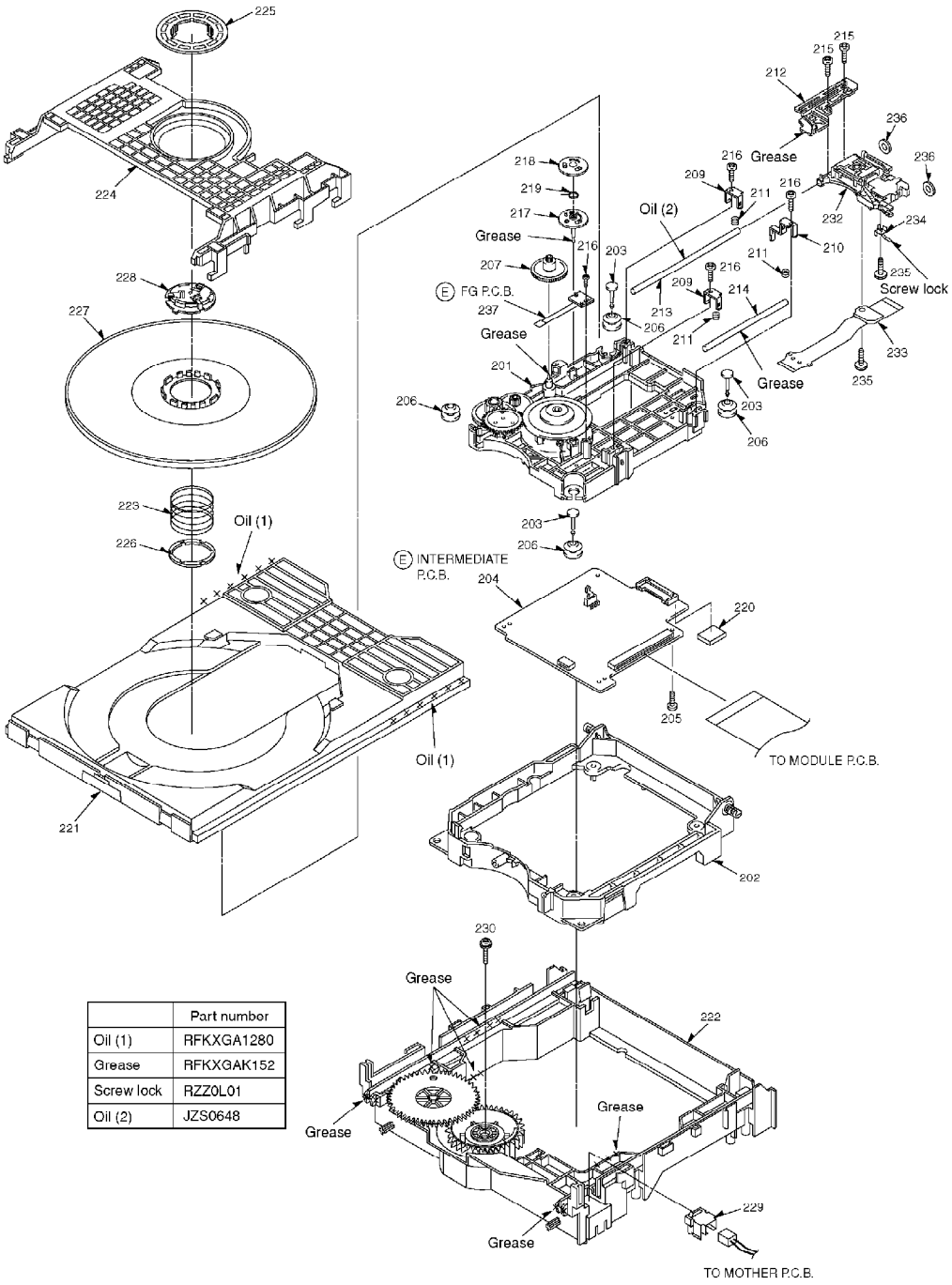
17. PRINT CIRCUIT BOARD

17.1. POWER SUPPLY P.C.B.

17.2. MODULE P.C.B. (1/2) (COMPONENT SIDE)
17.3. MODULE P.C.B. (2/2) (FOIL SIDE)
17.4. MODULE P.C.B. AND MOTHER P.C.B. ADDRESS INFORMATION
17.5. MOTHER P.C.B.
17.6. FRONT1 P.C.B. AND FRONT2 P.C.B. AND FRONT3 P.C.B.
18. EXPLODED VIEWS
18.1. Casing Parts & Mechanism Section Exploded View

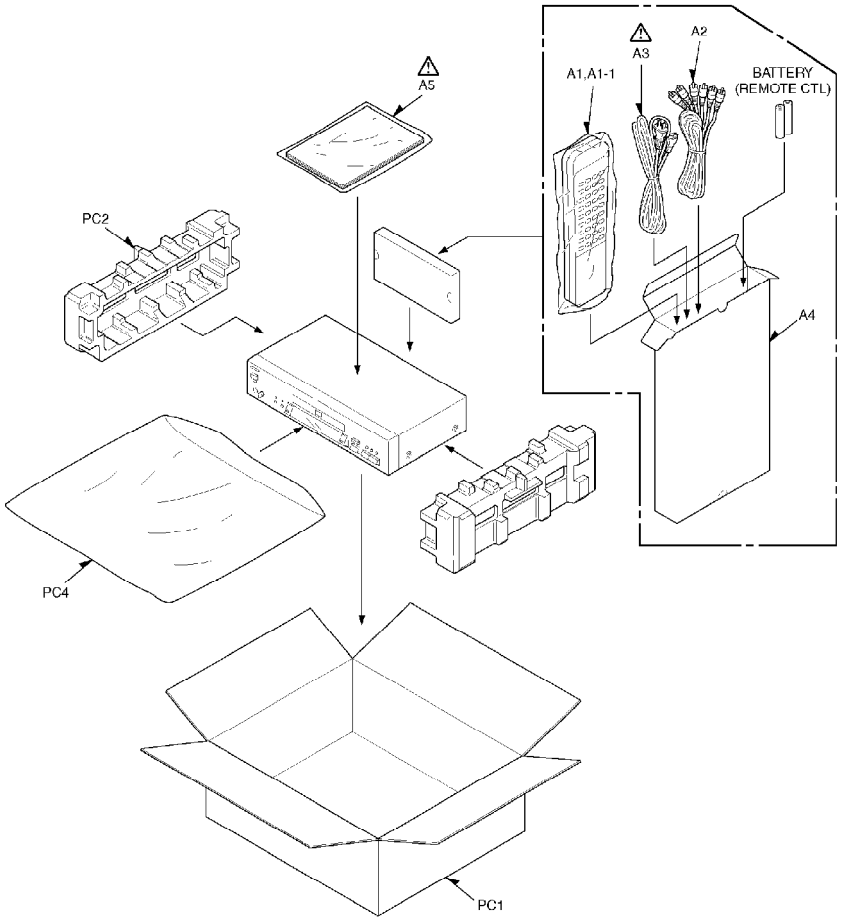


18.2. Mechanism Section Exploded View



	Part number
Oil (1)	RFKXGA1280
Grease	RFKXGAK152
Screw lock	RZZ0L01
Oil (2)	JZS0648

18.3. Packing & Accessories Section Exploded View



19. REPLACEMENT PARTS LIST

Notes:

***Important safety notice:**

Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

***Warning: This product uses a laser diode. Refer to caution statements.**
***ACHTUNG: Die lasereinheit nicht zerlegen. Die lasereinheit darf nur gegen enic vom hersteller spezifizierte einheit ausgetauscht werden.**
***Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F= Farads (F).**
***Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).**
***The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availabilityis dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.**
***"<IA>", marks in Remarks indicate languages of instruction manuals. [<IA>: American English/ Canadian French]**
***"*1", "*2", "*3", "*4", marks in Remarks indicate P.C.B.s. / [*1:POWER SUPPLY P.C.B., *2: MOTHER P.C.B., *3:MODULEP.C.B., *4:FRONT 1 P.C.B]**
***[SPC] in Remarks columns parts that are supplied by S.P.C..**

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RKM0437-N	TOP COVER	1	[SPC]
2	VHD0690	SCREW	3	[SPC]
3	VHD1094	SCREW	4	[SPC]
4	VYK5504	LEG	4	[SPC]
6	XTV3+8G	SCREW	4	[SPC]
7	REP3095C	MODULE P.C.B.	1	(RTL)[SPC]
8	REP3096C	MOTHER P.C.B.	1	(RTL)[SPC]
8-1	RYQ0344-K	FL HOLDER	1	[SPC]
10	RYF0570-N	TRAY TOP	1	[SPC]
11	XTV3+10J	SCREW	6	[SPC]
12	RHD30090	SCREW	5	[SPC]
13	VHD0690	SCREW	12	[SPC]
14	REZ1354	FLEXIBLE CABLE(38P)	1	(FP5002-FP5201)[SPC]
15	REX1057	CONNECTOR CABLE(2P)	1	(P6005-MECHA) / [SPC]
16	RYP0969A-N	FRONT PANEL ASS'Y 1	1	[SPC]
16-1	RGU1930-N	OPERATION BUTTON	1	[SPC]
16-2	RGU1931-N	AUDIO BUTTON	1	[SPC]
16-3	RGU1932-N	POWER BUTTON	1	[SPC]
17	REP3097B	FRONT 1,2,3 P.C.B.	1	(RTL)[SPC]
18	XTBS26+10J	SCREW	11	[SPC]
24	RKW0627-Q	FRONT COVER	1	[SPC]
30	REP3131A	POWER SUPPLY P.C.B.	1	(RTL)[SPC]
30-1	XYN3+F8	SCREW	2	[SPC]
33	VMD3854	SPACER(L)	1	[SPC]
34	VMD3855	SPACER(R)	1	[SPC]
35	XYE3+EF12	SCREW	2	[SPC]
36	XTV3+20F	SCREW	6	[SPC]
37	RGQ0290-N	SIDE COVER(L)	1	[SPC]
38	RGQ0291-N	SIDE COVER(R)	1	[SPC]
39	RGL0525-Q	INDICATER(AUDIO)	1	[SPC]
40	RGL0527-Q	INDICATER(DNR)	1	[SPC]
41	RGL0540-Q	INDICATER(RE-MASTER)	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
42	VGU8354	VOLUME KNOB	1	[SPC]
43	XYE3+FJ8	SCREW	1	[SPC]
44	REZ1357	FLEXIBLE CABLE(16P)	1	(FP4701-FP6001)[SPC]
45	REZ1356	FLEXIBLE CABLE(6P)	1	(FP6002-FP6201)[SPC]
201	RXQ0742	SPINDLE MOTOR ASS'Y	1	[SPC]
202	RMR1323-X	MIDDLE CHASSIS	1	[SPC]
203	RMS0712	FIXED PIN	3	[SPC]
204	REP3082A-N	INTERMEDIATE P.C.B.	1	(RTL)[SPC]
205	XTW2+8P	SCREW	1	[SPC]
206	RMG0545-A	FLOATING RUBBER	4	[SPC]
207	RDG0499	TRAVERSE GEAR(A)	1	[SPC]
209	RMC0415	ADJUST SPRING HOLDER1	2	[SPC]
210	RMC0416	ADJUST SPRING HOLDER2	1	[SPC]
211	RME0320	ADJUST SPRING	3	[SPC]
212	RMM0234	TRAVERSE DRIVE RACK	1	[SPC]
213	RMS0710	DRIVE SHAFT	1	[SPC]
214	RMS0711	GUIDE SHAFT	1	[SPC]
215	RHD17028	SCREW	2	[SPC]
216	VHD1224	SCREW	4	[SPC]
217	RDG0500	TRAVERSE GEAR(B)	1	[SPC]
218	RDG0501	TRAVERSE GEAR(C)	1	[SPC]
219	RME0319	TRAVERSE GEAR SPRING	1	[SPC]
220	RMG0558-K	PCB RUBBER	1	[SPC]
221	RGQ0280-K	TRAY	1	[SPC]
222	RXQ0727	MECHA CHASSIS ASS'Y	1	[SPC]
223	RME0318	CLAMPER SPRING	1	[SPC]
224	RMR1317-K	CLAMP PLATE	1	[SPC]
225	RMR1318-X	FIXTURE	1	[SPC]
226	RMR1321-X	SPRING HOLDER	1	[SPC]
227	RXQ0724	CLAMPER ASS'Y	1	[SPC]
228	RXQ0729	MAGNET HOLDER ASS'Y	1	[SPC]
229	RSH1A049-U	OPEN SWITCH	1	[SPC]
230	XTW3+12S	SCREW	1	[SPC]
232	RAF3020A-1	OPTICAL PICK-UP	1	[SPC]
233	RJB2308A	INTERFACE FPC	1	(FP5001-OPU) / [SPC]
234	RMC0418	SHAFT SPRING	1	[SPC]
235	VHD1057	SCREW	2	[SPC]
236	RMG0561-T	CUSHION RUBBER	2	[SPC]
237	REP3081A	FG P.C.B.	1	(RTL)[SPC]
A1	N2QAJB000015	REMOTE CONTROL ASS'Y	1	[SPC]
A1-1	103RRC19901R	BATTERY COVER	1	[SPC]
A2	VJA0788	AV CORD	1	K1EA06CA0002 [SPC]
A3	RJA0065-A	AC CORD	1	K2CB2CB00006 [SPC] ⚠
A4	RPQF0220	ACCESSORY CASE	1	[SPC]
A5	RQT5735-Y	OPERATING INSTRUCTIONS	1	<IA>[SPC] ⚠
C1001,02	VCF0183M683	0.068U	2	F0XAF683A002 [SPC]
C1003	VCK0299E102	CERAMIC CAPACITOR	1	F1BAF1020005 [SPC] ⚠
C1005	VCK0299E222	CERAMIC CAPACITOR	1	F1BAF2220006 [SPC] ⚠
C1014	ECA2EGE101	100U	1	[SPC] ⚠
C1021	VCK0266K471T	CERAMIC CAPACITOR	1	F1B2H4710002 [SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1031	VCK0266K182T	CERAMIC CAPACITOR	1	F1B2H1820001 [SPC]
C1041	ECQB1H223JF	50V 0.022U	1	[SPC]
C1051	ECQB1H104JF	50V 0.1U	1	[SPC]
C1052	ECQB1H683JF	50V 0.068U	1	[SPC]
C1053	ECQB1H104JF	50V 0.1U	1	[SPC]
C1061	VCEA0JJC470B	6.3V 47U	1	F2A0J4700003 [SPC]
C1101	ECQV1H104JL	50V 0.1U	1	[SPC]
C1102	ECQB1H223JF	50V 0.022U	1	[SPC]
C1111	VCEA1AJH182	10V 1800U	1	F2A1A1820001 [SPC]
C1112	ECA1CAM102X	16V 1000U	1	[SPC]
C1115	ECFR1E104ZF5	25V 0.1U	1	F1C1E1040003 [SPC]
C1116	ECA1APX221	10V 220U	1	[SPC]
C1117	ECA1CAM102X	16V 1000U	1	[SPC]
C1120	ECUX1H101JCV	50V 100P	1	[SPC]
C1121	ECUX1C104ZFV	16V 0.1U	1	[SPC]*2
C1121	VCEA1AJH102B	10V 1000U	1	F2A1A102A013 [SPC]*1
C1122	ECUV1C103KBV	16V 0.01U	1	F1H1C103A071 [SPC]*2
C1122	VCEA1AJC102B	10V 1000U	1	F2A1A1020004 [SPC]*1
C1124	ECUX1C393KBV	16V 0.039U	1	[SPC]
C1125	ECA0JM102	6.3V 1000U	1	[SPC]*1
C1125	ECUX1H330JCV	50V 33P	1	[SPC]*2
C1126	ECUX1H103KBV	50V 0.01U	1	[SPC]
C1127	ECUX1C223KBV	16V 0.022U	1	[SPC]
C1131	ECEA1VAU221	35V 220U	1	[SPC]
C1141	ECA0JM331	6.3V 330U	1	[SPC]*2
C1141	ECEA1VAU221	35V 220U	1	[SPC]*1
C1142	ECUX1H222KBV	50V 2200P	1	[SPC]
C1143	ECUM1H101JCN	50V 100P	1	[SPC]
C1144	RCE0JSA470BX	6.3V 47U	1	F2D0J4700003 [SPC]
C1145	ECA0JM102	6.3V 1000U	1	[SPC]
C1151	VCEA1EJH271B	25V 270U	1	F2A1E2710001 [SPC]
C1153	VCEA1EJC221B	25V 220U	1	F2A1E2210008 [SPC]
C1154	VCEA1CJC221B	16V 220U	1	F2A1C2210006 [SPC]
C1155	ECFR1E104ZF5	25V 0.1U	1	F1C1E1040003 [SPC]
C1161	VCEA1HJH560B	50V 56U	1	F2A1H5600002 [SPC]
C1171	VCEA1AJH181B	10V 180U	1	F2A1A1810002 [SPC]
C2001,02	EEVHB0J101	6.3V 100U	2	EEVHB0J101P [SPC]
C2003-18	ECUX1C104ZFV	16V 0.1U	16	[SPC]
C2021	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C2022-25	ECUX1C104ZFV	16V 0.1U	4	[SPC]
C2026	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2031,32	ECUX1C104KBV	16V 0.1U	2	[SPC]
C2034	ECUX1C393KBV	16V 0.039U	1	[SPC]
C2035	ECUX1H822KBV	50V 8200P	1	[SPC]
C2036	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2038	ECUX1C104KBV	16V 0.1U	1	[SPC]
C2039	ECUV1C103KBV	16V 0.01U	1	F1H1C103A071 [SPC]
C2040	ECUX1H102JCV	50V 1000P	1	[SPC]
C2041	ERJ3GEYJ103	1/16W 10K	1	[SPC]
C2042	ERJ3GEYJ561	1/16W 560	1	[SPC]
C2043	ECUX1H101JCV	50V 100P	1	[SPC]
C2044,45	ECUX1H391JCV	50V 390P	2	[SPC]
C2046	ECUX1H102JCV	50V 1000P	1	[SPC]
C2047	ECUV1C103KBV	16V 0.01U	1	F1H1C103A071 [SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2048	ECUX1C153KBV	16V 0.015U	1	[SPC]
C2050	ECUX1C333KBV	16V 0.033U	1	[SPC]
C2051	ECUX1H680JCV	50V 68P	1	[SPC]
C2052,53	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C2054	ECUX1H681JCV	50V 680P	1	[SPC]
C2055	ECUX1H682KBV	50V 6800P	1	[SPC]
C2056,57	ECUX1H272KBV	50V 2700P	2	[SPC]
C2058	ECUX1H102JCV	50V 1000P	1	[SPC]
C2059	ECYX1H821JCV	50V 820P	1	ECUX1H821JCV [SPC]
C2060	ECUX1H102JCV	50V 1000P	1	[SPC]
C2061,62	ECUX1H331JCV	50V 330P	2	F1H1H3310005 [SPC]
C2063-65	ECUX1H102JCV	50V 1000P	3	[SPC]
C2066-68	ECUX1H472KBV	50V 4700P	3	[SPC]
C2073	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C2501	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C2502	ECEV0JA331	6.3V 330U	1	[SPC]
C2503	ECEV1CA101W	16V 100U	1	[SPC]
C2504-08	ECUX1C104ZFV	16V 0.1U	5	[SPC]
C2511,12	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C2601,02	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C3001,02	ECEV0JA331	6.3V 330U	2	[SPC]
C3003-07	ECUX1C104ZFV	16V 0.1U	5	[SPC]
C3008,09	ECUX1A105ZFV	10V 1U	2	[SPC]
C3010-35	ECUX1C104ZFV	16V 0.1U	26	[SPC]
C3038,39	ECUZ1A105KBN	10V 1U	2	F1J1A1050018 [SPC]
C3040,41	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C3051-53	ECUX1C104ZFV	16V 0.1U	3	[SPC]
C3054	ECUX1H220JCV	50V 22P	1	[SPC]
C3061-67	ECUX1C104ZFV	16V 0.1U	7	[SPC]
C3091	ECUX1C104KBV	16V 0.1U	1	[SPC]
C3092	ECUV0J105KBV	6.3V 1U	1	F1H0J105A001 [SPC]
C3093	ECUZ1A105KBN	10V 1U	1	F1J1A1050018 [SPC]
C3094	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3095	EEVHB0J330	6.3V 33U	1	[SPC]
C3096	ECUZ1A105KBN	10V 1U	1	F1J1A1050018 [SPC]
C3201	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C3202-06	ECUX1C104ZFV	16V 0.1U	5	[SPC]
C3207	ECUX1C104KBV	16V 0.1U	1	[SPC]
C3208,09	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C3210	ECUX1C104KBV	16V 0.1U	1	[SPC]
C3211,12	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C3220	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C3221	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3226	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3231	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3236	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3251	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C3252	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3253	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C3254	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3261	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3500	ECA0JM471G	6.3V 470U	1	ECA0JM471 [SPC]
C3501	ECA0JM221	6.3V 220U	1	[SPC]
C3502,03	ECUX1H103ZFV	50V 0.01U	2	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3511	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3531	ECA0JM221	6.3V 220U	1	[SPC]
C3532	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3533	ECEA1CKA470	16V 47U	1	[SPC]
C3534	ECUX1H103KBV	50V 0.01U	1	[SPC]
C3535	ECA0JM221	6.3V 220U	1	[SPC]
C3536	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3537	ECEA1CKA100	16V 10U	1	[SPC]
C3538	ECA0JM102	6.3V 1000U	1	[SPC]
C3539	ECEA1CKA100	16V 10U	1	[SPC]
C3540	ECA0JM102	6.3V 1000U	1	[SPC]
C3542	ECUX1H103KBV	50V 0.01U	1	[SPC]
C3543,44	ECUX1H103ZFV	50V 0.01U	2	[SPC]
C3551	ECA0JM221	6.3V 220U	1	[SPC]
C3552-54	ECUX1H103ZFV	50V 0.01U	3	[SPC]
C3561,62	ECUX1H103ZFV	50V 0.01U	2	[SPC]
C3571,72	ECUX1H103ZFV	50V 0.01U	2	[SPC]
C3581	ECA0JM221	6.3V 220U	1	[SPC]
C3582	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C3583	ECA0JM471G	6.3V 470U	1	ECA0JM471 [SPC]
C3584	ECEA1CKA220	16V 22U	1	[SPC]
C3585	ECA0JM331	6.3V 330U	1	[SPC]
C3586	ECEA1CKA220	16V 22U	1	[SPC]
C3587	ECA0JM331	6.3V 330U	1	[SPC]
C3588	ECEA1CKA220	16V 22U	1	[SPC]
C3701-03	EEVHB0J101	6.3V 100U	3	EEVHB0J101P [SPC]
C3711-24	ECUX1C104ZFV	16V 0.1U	14	[SPC]
C3731,32	EEVHB0J101	6.3V 100U	2	EEVHB0J101P [SPC]
C3733-44	ECUX1C104ZFV	16V 0.1U	12	[SPC]
C3751	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C3752-55	ECUX1C104ZFV	16V 0.1U	4	[SPC]
C3756	ECUX1C104KBV	16V 0.1U	1	[SPC]
C3757	ECUZ1A105KBN	10V 1U	1	F1J1A1050018 [SPC]
C3758,59	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C3761	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3766	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3770	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C3771	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3781	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C3782	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C3783	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4201	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4202	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4210	ECEV0JA102	6.3V 1000U	1	[SPC]
C4211	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4212	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4213	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4214	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4215	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4216	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4217,18	RCST1AY106RC	10V 10U	2	F3F1A1060002 [SPC]
C4219	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4220	RCST1AX226RC	10V 22U	1	F3G1A226A002 [SPC]
C4221-24	ECUX1C104ZFV	16V 0.1U	4	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4225	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4227	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4229	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4230	RCST1AX226RC	10V 22U	1	F3G1A226A002 [SPC]
C4231-34	ECUX1C104ZFV	16V 0.1U	4	[SPC]
C4235	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4237	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4239	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4240	RCST1AX226RC	10V 22U	1	F3G1A226A002 [SPC]
C4241-44	ECUX1C104ZFV	16V 0.1U	4	[SPC]
C4245	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4247	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C4249-53	ECUX1C104ZFV	16V 0.1U	5	[SPC]
C4261	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4301	VCEA0JAE470B	6.3V 47U	1	F2A0J470A120 [SPC]
C4302	ECHR1H102JZ	50V 1000P	1	[SPC]
C4303	ECHR1H101JZ	50V 100P	1	[SPC]
C4304	ECEA1HKN010	50V 1U	1	[SPC]
C4305	VCEA0JAE470B	6.3V 47U	1	F2A0J470A120 [SPC]
C4306,07	ECHR1H223JZ	50V 0.022U	2	[SPC]
C4308,09	VCEA1EAE101B	25V 100U	2	F2A1E1010013 [SPC]
C4310	ECHR1H101JZ	50V 100P	1	[SPC]
C4311	VCEA0JAE470B	6.3V 47U	1	F2A0J470A120 [SPC]
C4312	ECHR1H102JZ	50V 1000P	1	[SPC]
C4313,14	ECHR1H101JZ	50V 100P	2	[SPC]
C4315	VCEA0JAE470B	6.3V 47U	1	F2A0J470A120 [SPC]
C4316	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4317	ECA1APX102	10V 1000U	1	[SPC]
C4318	VCEA1CAE101B	16V 100U	1	F2A1C1010011 [SPC]
C4319	ECHR1H223JZ	50V 0.022U	1	[SPC]
C4320	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4321	ECA1CAK470X	16V 47U	1	[SPC]
C4322	ECWM1H102JZ5	50V 1000P	1	F0A1H102A017 [SPC]
C4323	ECWM1H101JZ5	50V 100P	1	F0A1H101A017 [SPC]
C4325	ECA1CAK470X	16V 47U	1	[SPC]
C4331	ECA1CAK470X	16V 47U	1	[SPC]
C4332	ECWM1H102JZ5	50V 1000P	1	F0A1H102A017 [SPC]
C4333	ECWM1H101JZ5	50V 100P	1	F0A1H101A017 [SPC]
C4335	ECA1CAK470X	16V 47U	1	[SPC]
C4341	ECA1CAK470X	16V 47U	1	[SPC]
C4342	ECWM1H102JZ5	50V 1000P	1	F0A1H102A017 [SPC]
C4343	ECWM1H101JZ5	50V 100P	1	F0A1H101A017 [SPC]
C4345	ECA1CAK470X	16V 47U	1	[SPC]
C4346,47	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C4351	ECA1CAK470X	16V 47U	1	[SPC]
C4352	ECWM1H102JZ5	50V 1000P	1	F0A1H102A017 [SPC]
C4353	ECWM1H101JZ5	50V 100P	1	F0A1H101A017 [SPC]
C4355	ECA1CAK470X	16V 47U	1	[SPC]
C4361	ECA1CAK470X	16V 47U	1	[SPC]
C4362	ECWM1H102JZ5	50V 1000P	1	F0A1H102A017 [SPC]
C4363	ECWM1H101JZ5	50V 100P	1	F0A1H101A017 [SPC]
C4365	ECA1CAK470X	16V 47U	1	[SPC]
C4366,67	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C4371	ECA1CAK470X	16V 47U	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4372	ECUX1H102JCV	50V 1000P	1	[SPC]
C4373	ECUX1H101JCV	50V 100P	1	[SPC]
C4376	ECA1ANK470X	10V 47U	1	[SPC]
C4501	ECUX1H102JCV	50V 1000P	1	[SPC]
C4511	ECUX1H102JCV	50V 1000P	1	[SPC]
C4521	ECUX1H102JCV	50V 1000P	1	[SPC]
C4531	ECUX1H102JCV	50V 1000P	1	[SPC]
C4541	ECUX1H102JCV	50V 1000P	1	[SPC]
C4551	ECUX1H102JCV	50V 1000P	1	[SPC]
C4561	ECUX1H102JCV	50V 1000P	1	[SPC]
C4571	ECUX1H102JCV	50V 1000P	1	[SPC]
C4581,82	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C4584-89	ECUX1C104ZFV	16V 0.1U	6	[SPC]
C4592	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4701,02	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C4731	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4734,35	ECUX1H103ZFV	50V 0.01U	2	[SPC]
C4736,37	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C4738,39	ECEA1AKA101	10V 100U	2	[SPC]
C4751	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4753	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4755	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4758	ECEA0JKA101	6.3V 100U	1	[SPC]
C4761	ECUX1H271JCV	50V 270P	1	[SPC]
C4763	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4764	ECEA1HKA4R7	50V 4.7U	1	[SPC]
C4771	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4772	ECUX1H151JCV	50V 150P	1	[SPC]
C4773	ECUX1H680JCV	50V 68P	1	[SPC]
C4774	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4781	ECEA1HKA4R7	50V 4.7U	1	[SPC]
C4782	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C4901	VCEA1EAE101B	25V 100U	1	F2A1E1010013 [SPC]
C4911	VCEA1EJC221B	25V 220U	1	F2A1E2210008 [SPC]
C4912	VCEA1EAE101B	25V 100U	1	F2A1E1010013 [SPC]
C4921	ECHR1H223JZ	50V 0.022U	1	[SPC]
C4922	ECA1APX331	10V 330U	1	[SPC]
C4923	ECHR1H223JZ	50V 0.022U	1	[SPC]
C4924	ECA1APX471	10V 470U	1	[SPC]
C4931	ECHR1H223JZ	50V 0.022U	1	[SPC]
C4932	ECA1APX331	10V 330U	1	[SPC]
C4933	ECHR1H223JZ	50V 0.022U	1	[SPC]
C4934	ECA1APX471	10V 470U	1	[SPC]
C5001,02	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C5201,02	EEVHB1C100	16V 10U	2	[SPC]
C5203-05	ECUX1C104ZFV	16V 0.1U	3	[SPC]
C5211	EEVHB0J470	6.3V 47U	1	[SPC]
C5215	EEVHB0J470	6.3V 47U	1	[SPC]
C5221	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C5222	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C5231	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
C5232-34	ECUX1C104ZFV	16V 0.1U	3	[SPC]
C5235,36	ECUX1C104KBV	16V 0.1U	2	[SPC]
C5251	ECUX1H101JCV	50V 100P	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C5252	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5261	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C5262	ECYX1H821JCV	50V 820P	1	ECUX1H821JCV [SPC]
C5263	ECUX1H221JCV	50V 220P	1	[SPC]
C5264	ECYX1H821JCV	50V 820P	1	ECUX1H821JCV [SPC]
C5271,72	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C5273	ECUX1H182KBV	50V 1800P	1	[SPC]
C5274	ECUX1C104KBV	16V 0.1U	1	[SPC]
C5281	ECUX1H392KBV	50V 3900P	1	[SPC]
C5282	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C5283,84	ECUX1H561JCV	50V 560P	2	[SPC]
C5285	ECUX1C273KBV	16V 0.027U	1	[SPC]
C5287	ECUV1A224KBV	10V 0.22U	1	F1H1A224A001 [SPC]
C5288	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C5289-92	ECUX1C104KBV	16V 0.1U	4	[SPC]
C5293-96	ECUX1C104ZFV	16V 0.1U	4	[SPC]
C5297,98	ECUX1C473KBV	16V 0.047U	2	[SPC]
C5299	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6001	ECEA0JKA221	6.3V 220U	1	[SPC]
C6002	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6003	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C6005	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C6007	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C6008	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6013	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6014	ECEA0JKS101	6.3V 100U	1	[SPC]
C6015	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6016	ECEA1HKS100	50V 10U	1	[SPC]
C6017	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6018	ECUX1H103ZFV	50V 0.01U	1	[SPC]
C6071	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6072	ECEA0JKS470	6.3V 47U	1	[SPC]
C6073	ECEA0JKS331	6.3V 330U	1	[SPC]
C6101	ECEA0JKS470	6.3V 47U	1	[SPC]
C6102	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6201	EEVHB0J330	6.3V 33U	1	[SPC]
C6202-06	ECUX1C104ZFV	16V 0.1U	5	[SPC]
C6211	ECUX1H101JCV	50V 100P	1	[SPC]
C6215	ECUX1C104KBV	16V 0.1U	1	[SPC]
C6221	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6251	ECUX1H103KBV	50V 0.01U	1	[SPC]
C6252	EEVHB0J101	6.3V 100U	1	EEVHB0J101P [SPC]
C6271	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6272	RCST1AY106RC	10V 10U	1	F3F1A1060002 [SPC]
C6301,02	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C6501	EEVHB0J330	6.3V 33U	1	[SPC]
C6502,03	ECUX1C104ZFV	16V 0.1U	2	[SPC]
C6504	ECUX1H102JCV	50V 1000P	1	[SPC]
C6505	ECUX1H080DCV	50V 8P	1	[SPC]
C6511	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6521	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6522	ECUX1H102JCV	50V 1000P	1	[SPC]
C6523	ECUX1H050DCV	50V 5P	1	[SPC]
C6531	ECUX1C104ZFV	16V 0.1U	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C6541	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6551	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6561	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6562,63	ECUX1H150JCV	50V 15P	2	[SPC]
C6571	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6581	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6591	ECUX1C104ZFV	16V 0.1U	1	[SPC]
C6801,02	EEVHB0J101	6.3V 100U	2	EEVHB0J101P [SPC]
C6803-14	ECUX1C224ZFV	16V 0.22U	12	[SPC]
D1001	ENC471D5ATUB	DIODE	1	D4EA7471A001 [SPC] ⚠
D1002	ENC361D5ATRB	DIODE	1	D4EA7361A002 [SPC] ⚠
D1011	S1WBA80	DIODE	1	B0EBKT000003 [SPC] ⚠
D1031	VSD0002	DIODE	1	B0HAGR000005 [SPC]
D1041	AU01Z	DIODE	1	B0HAGM000006 [SPC]
D1051,52	1SS254	DIODE	2	B0AAED000003 [SPC]
D1053	MA4036-M	DIODE	1	MAZ40360M [SPC]
D1054	AU01Z	DIODE	1	B0HAGM000006 [SPC]
D1101	MAZ70750AC	DIODE	1	[SPC]
D1111	21DQ04FC4	DIODE	1	B0JAME000033 [SPC]
D1121	21DQ04FC4	DIODE	1	B0JAME000033 [SPC]
D1126	B0EAKL000031	DIODE	1	[SPC]
D1131	11EQS06TA1	DIODE	1	B0JAMG000010 [SPC]
D1132	MA7150B-TR	DIODE	1	MAZ71500BC [SPC]
D1141	11EQS06TA1	DIODE	1	B0JAMG000010 [SPC]*1
D1141	B0JCME000025	DIODE	1	[SPC]*2
D1142	MA111-TX	DIODE	1	MA2J11100L [SPC]
D1145	MA8039H	DIODE	1	MAZ80390H [SPC]
D1151,52	11EQS06TA1	DIODE	2	B0JAMG000010 [SPC]
D1153	B0EAKL000031	DIODE	1	[SPC]
D1161	AU01Z	DIODE	1	B0HAGM000006 [SPC]
D1162	MA4030H	DIODE	1	MAZ40300H [SPC]
D1171	AK04	DIODE	1	B0JAMC000003 [SPC]
D3251	MA111-TX	DIODE	1	MA2J11100L [SPC]
D3781	MA111-TX	DIODE	1	MA2J11100L [SPC]
D4596	MA3047M	DIODE	1	MAZ30470M [SPC]
D4901	AK04WS	DIODE	1	B0JAME000059 [SPC]
D4921	1SS355TE-17	DIODE	1	B0ACCK000005 [SPC]
D4931	1SS355TE-17	DIODE	1	B0ACCK000005 [SPC]
D5261	MA716	DIODE	1	MA3X71600L [SPC]
D6071	MA8039H	DIODE	1	MAZ80390H [SPC]
D6072	AK04WS	DIODE	1	B0JAME000059 [SPC]
D6103	LNJ301MPUJAD	LED(GREEN),RMTR	1	[SPC]
D6104	LNJ401NPYJA	LED(AMBER),A-ONLY	1	[SPC]
D6105	LMW9A8BYB0A1	LED(BLUE),525P	1	LNW9A8BYBZ [SPC]
D6106	MA4051-M	DIODE	1	MAZ40510M [SPC]
D6201	LNJ301MPUJAD	LED(GREEN),DNR	1	[SPC]
D6215	MA728-TX	DIODE	1	MA2J72800L [SPC]
D6501	MA304	DIODE	1	MA2Z30400L [SPC]
D6521	MA304	DIODE	1	MA2Z30400L [SPC]
DL6001	A2BC00000038	DISPLAY TUBE	1	[SPC]
DZ1001	VSQ1003	SURGE ABSORBER	1	J0LE00000016 [SPC] ⚠

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
F1001	VSF0248C16	FUSE	1	K5Y162B00004 [SPC] ⚠
FL3501	ELB4A027B	FILTER	1	[SPC]
FL3511	ELB4B106B	FILTER	1	[SPC]
FL3551	ELB4B105B	FILTER	1	[SPC]
FL3561	ELB4C077B	FILTER	1	[SPC]
FL4201	VLF1491S105T	FILTER	1	F1J1A1050021 [SPC]
FL6251	VLF1491S104T	FILTER	1	F1J1E1040022 [SPC]
FL6252,53	VLF1491S105T	FILTER	2	F1J1A1050021 [SPC]
FL6255,56	VLF1491S105T	FILTER	2	F1J1A1050021 [SPC]
FP4701	VJS3537B016G	CONNECTOR 16P	1	K1MN16B00066 [SPC]
FP5001	K1MN30B00062	CONNECTOR 30P	1	[SPC]
FP5002	K1MN38B00005	CONNECTOR 38P	1	[SPC]
FP5003	K1MN04B00036	CONNECTOR 4P	1	[SPC]
FP5201	K1MN38A00005	CONNECTOR 38P	1	[SPC]
FP6001	VJS3537B016G	CONNECTOR 16P	1	K1MN16B00066 [SPC]
FP6002	VJS3537A006G	CONNECTOR 6P	1	K1MN06A00034 [SPC]
FP6201	VJS3537B006G	CONNECTOR 6P	1	K1MN06B00061 [SPC]
IC1101	UPC1093J-1-T	IC	1	C0DAEJC00002 [SPC]
IC1121	C0DBAMZ00003	IC	1	[SPC]
IC1125	PQ07RX11	IC	1	C0DAEZG00009 [SPC]
IC1151	D0DAZHG00032	IC	1	[SPC]
IC2001	MN103S26EGA	IC	1	[SPC]
IC2501	C0GBG0000020	IC	1	[SPC]
IC2502	C0JBAS000116	IC	1	[SPC]
IC3001	MN677531KA	IC	1	[SPC]
IC3061	C3ABPG000057	IC	1	[SPC]
IC3091	NJM2115VTE1	IC	1	C0ABBB000105 [SPC]
IC3201	C0ZBZ0000459	IC	1	[SPC]
IC3251	C0CBCBD00002	IC	1	[SPC]
IC3261	BU4053BCF	IC	1	C0JBAR000289 [SPC]
IC3531	AN3581S	IC	1	[SPC]
IC3581	BA7660FS	IC	1	C9ZB00000282 [SPC]
IC3701	GMVLX1A-X	IC	1	C0ZBZ0000365 [SPC]
IC3731	M54V25632A10	IC	1	C3ZBL0000010 [SPC]
IC3751	C1AB00001401	IC	1	[SPC]
IC3781	C0CBCBD00002	IC	1	[SPC]
IC4201	TK71533SCL	IC	1	C0DBCGB00001 [SPC]
IC4211	C0FBBK000020	IC	1	[SPC]
IC4221	PCM1746	IC	1	C0FBBK000015 [SPC]
IC4231	PCM1746	IC	1	C0FBBK000015 [SPC]
IC4241	PCM1746	IC	1	C0FBBK000015 [SPC]
IC4261	TC7W32FUTL	IC	1	C0JBAE000098 [SPC]
IC4301,02	NJM4580M	IC	2	C0ABBB000126 [SPC]
IC4321	NJM4580M	IC	1	C0ABBB000126 [SPC]
IC4341	NJM4580M	IC	1	C0ABBB000126 [SPC]
IC4361	NJM4580M	IC	1	C0ABBB000126 [SPC]
IC4701	NJM4580M	IC	1	C0ABBB000126 [SPC]
IC4731	M5218AFP	IC	1	C0ABBB000071 [SPC]
IC4751,52	AHCT1G08DBV	IC	2	C0JBAB000351 [SPC]
IC4781	B3RAE0000021	IC	1	[SPC]
IC4901	PQ09DZ1U	IC	1	C0CBCHG00001 [SPC]
IC5201	AN8703FH	IC	1	[SPC]
IC5261	C0ABHB000004	IC	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC5262	CLC58021MX	IC	1	[SPC]
IC5263	C0JBAR000282	IC	1	[SPC]
IC5264	TC7W53FUTL	IC	1	C0JBAR000155 [SPC]
IC5265	C0JBAS000116	IC	1	[SPC]
IC5266	C0ABHB000004	IC	1	[SPC]
IC5267	AHC2G66HDCTR	IC	1	C0JBAS000109 [SPC]
IC6001	MN101C35DCG	IC	1	[SPC]
IC6002	PST9327UR	IC	1	C0EBE0000094 [SPC]
IC6004	C0ZBZ0000460	IC	1	[SPC]
IC6101	B3RAD0000029	IC	1	[SPC]
IC6201	MN102H60GFB	IC	1	[SPC]
IC6211	PST596JNR	IC	1	C0EBE0000070 [SPC]
IC6221	C3EBFC000025	IC	1	[SPC]
IC6271	PQ018EZ01ZP	IC	1	C0DBCHG00001 [SPC]
IC6301	RFKFRP50C320	IC	1	[SPC]
IC6501	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6511	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6521	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6531	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6541	AHC2G74HDCTR	IC	1	C0JBAF000367 [SPC]
IC6551	AHC2G157HDCT	IC	1	[SPC]
IC6561	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6571	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6581	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6591	AHC1GU04HDCK	IC	1	C0JBAB000356 [SPC]
IC6801	MN67736WK	IC	1	[SPC]
J4731	VJJ0578	HEADPHONE JACK	1	[SPC]
JK3541	VJJ0561	S-VIDEO JACK	1	K1CB104B0018 [SPC]
JK3581	K2HA103B0017	V-COMP JACK	1	[SPC]
JK4501	VJJ0643	AV OUT JACK	1	[SPC]
JK4502	VJJ0592	A OUT JACK	1	K2HA408B0035 [SPC]
JK4771	VJJ0590	D-A OUT JACK	1	[SPC]
K2002	ERJ3GEY0R00	1/16W 0	1	[SPC]
K3002-04	ERJ3GEY0R00	1/16W 0	3	[SPC]
K3201	ERJ3GEY0R00	1/16W 0	1	[SPC]
K3203	ERJ3GEY0R00	1/16W 0	1	[SPC]
K6231	ERJ3GEY0R00	1/16W 0	1	[SPC]
K6813	ERJ3GEY0R00	1/16W 0	1	[SPC]
L1001	ELF15N005A	NOISE FILTER	1	[SPC] ⚠
L1111	VLQ0611K100T	COIL 10UH	1	G0A101H00004 [SPC]
L1115	ELELN100KA	INDUCTOR 10UH	1	[SPC]
L1131	VLQEL05S330K	COIL 33UH	1	G0C330KA0004 [SPC]
L1141	VLQEL05S330K	COIL 33UH	1	G0C330KA0004 [SPC]*1
L1141	TAL10RP820LB	COIL 82UH	1	G0ZZ00001916 [SPC]*2
L1145	VLQ0655K220	COIL 22UH	1	G0A220G00016 [SPC]
L1151	VLQ0611K220T	COIL 22UH	1	G0A220H00005 [SPC]
L2001,02	VLQ0910K100	COIL 10UH	2	G1C100KA0019 [SPC]
L2021	VLQ0910K100	COIL 10UH	1	G1C100KA0019 [SPC]
L2501	ERJ14Y0R00	1/4W 0	1	[SPC]
L3251	ELJEA100KF	COIL 10UH	1	[SPC]
L3501	ELESE220JA	INDUCTOR 22UH	1	[SPC]
L3531,32	ELESE220JA	INDUCTOR 22UH	2	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L3551	ELESE220JA	INDUCTOR 22UH	1	[SPC]
L3581	ELESE220JA	INDUCTOR 22UH	1	[SPC]
L3751	ELJEA100KF	COIL 10UH	1	[SPC]
L4301	ELESE101JA	INDUCTOR 100UH	1	[SPC]
L4761	ELJNDR10JF	COIL 1UH	1	[SPC]
L4781	ELESE220JA	INDUCTOR 22UH	1	[SPC]
L5201,02	ELJEA100KF	COIL 10UH	2	[SPC]
L6001	VLQEL05T101J	COIL 100UH	1	G0C101JA0003 [SPC]
L6002-05	JAL45RA100J	COIL 10UH	4	G0C100JA0003 [SPC]
L6101	VLQEL05T221J	COIL 220UH	1	G0C221JA0003 [SPC]
L6501	VLQ0909J220	COIL 22UH	1	G1C220JA0010 [SPC]
LA4201	EXBV8VR000	RESISTOR-RESISTOR	1	[SPC]
LA6211,12	EXBV8VR000	RESISTOR-RESISTOR	2	[SPC]
LB1021	VLP0056-T	COIL	1	J0JKB0000003 [SPC]
LB3001,02	JALBK2HS470T	COIL 47UH	2	G1CYYYZ00003 [SPC]
LB3091	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB3203-07	ERJ3GEY0R00	1/16W 0	5	[SPC]
LB3543-46	ERJ3GEY0R00	1/16W 0	4	[SPC]
LB3581-83	ERJ3GEY0R00	1/16W 0	3	[SPC]
LB3701	JALBK2HS470T	COIL	1	G1CYYYZ00003 [SPC]
LB4201-11	ERJ3GEY0R00	1/16W 0	11	[SPC]
LB4701-16	J0JCC0000077	COIL	16	[SPC]
LB4771,72	ERJ3GEY0R00	1/16W 0	2	[SPC]
LB5001,02	VLP0323A601R	CHIP SOLID INDUCTOR	2	J0JCC0000062 [SPC]
LB5201,02	ERJ3GEY0R00	1/16W 0	2	[SPC]
LB5203-07	ERJ6GEY0R00	1/16W 0	5	[SPC]
LB5208-14	ERJ3GEY0R00	1/16W 0	7	[SPC]
LB5215	ERJ6GEY0R00	1/16W 0	1	[SPC]
LB5216-29	ERJ3GEY0R00	1/16W 0	14	[SPC]
LB6001,02	ERJ3GEY0R00	1/16W 0	2	[SPC]
LB6005-28	ERJ3GEY0R00	1/16W 0	24	[SPC]
LB6201	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6202	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6211-14	ERJ3GEY0R00	1/16W 0	4	[SPC]
LB6216-18	ERJ3GEYJ101	1/16W 100	3	D0GB101JA002 [SPC]
LB6219-21	ERJ3GEY0R00	1/16W 0	3	[SPC]
LB6251	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6501	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6511	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6512	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6521	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6531	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6532	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6541	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6542	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6551	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6552	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6561	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6571	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6572	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6581	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6582	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]
LB6591	VLP0323A601R	CHIP SOLID INDUCTOR	1	J0JCC0000062 [SPC]
LB6592	VLP0155-T	CHIP SOLID INDUCTOR	1	J0JCC0000119 [SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB6801,02	JALBK2HS470T	COIL 47UH	2	G1CYYYZ00003 [SPC]
LR1041	J1ZZA0000001	COIL	1	[SPC]
P1001	VJS2986-1	AC INLET	1	K2AB2K000003 [SPC] ⚠
PC1	RPG5243	PACKING CASE	1	[SPC]
PC2	VPN5296	CUSHION(L)	1	[SPC]
PC3	VPN5297	CUSHION(R)	1	[SPC]
PC4	VPF0731	POLYETHYLENE BAG	1	[SPC]
PP1101	VJP4223E018B	CONNECTOR (MALE) 18P	1	K1KA18A00045 [SPC]
PP1102	VJP4369A014B	CONNECTOR (MALE) 14P	1	[SPC]
PP3201	K1KA10A00278	CONNECTOR (MALE) 10P	1	[SPC]
PP4201	VJP4369E026B	CONNECTOR (MALE) 26P	1	K1KA26A00089 [SPC]
PP6001	K1KA18A00060	CONNECTOR (MALE) 18P	1	[SPC]
PP6002	VJP3233A002	CONNECTOR (MALE) 2P	1	K1KA02A00010 [SPC]
PR1161	VSF0015A025	IC PROTECTOR	1	D4FAR2500001 [SPC] ⚠
PR1171	VSF0015A10T	IC PROTECTOR	1	B1ZAZ0000030 [SPC] ⚠
PR4911	VSF0015A10T	IC PROTECTOR	1	B1ZAZ0000030 [SPC] ⚠
PS1101	VJS4223E018T	CONNECTOR (FEMALE) 18P	1	K1KB18A00026 [SPC]
PS3201	K1KB10A00092	CONNECTOR (FEMALE) 10P	1	[SPC]
PS4201	VJS4222C026B	CONNECTOR (FEMALE) 26P	1	K1KB26A00027 [SPC]
PS6201	VJS2961C010	CONNECTOR (FEMALE) 10P	1	K1KB10A00075 [SPC]
PS6202	K1KB18A00034	CONNECTOR (FEMALE) 18P	1	[SPC]
PS6251	VJS4222C014B	CONNECTOR (FEMALE) 14P	1	K1KB14A00037 [SPC]
Q1021	2SC4662LF654	TRANSISTOR	1	B1BADP000005 [SPC]
Q1051	PS2501-1H	PHOTO CUPLER	1	B3PAA0000049 [SPC] ⚠
Q1052	2SD1996-STA	TRANSISTOR	1	2SD19960SA [SPC]
Q1061	2SD1996-STA	TRANSISTOR	1	2SD19960SA [SPC]
Q1062	2SC3311A-S	TRANSISTOR	1	2SC3311AS [SPC]
Q1063	2SD1996-STA	TRANSISTOR	1	2SD19960SA [SPC]
Q1115	2SJ525TP	TRANSISTOR	1	B1DGDD000001 [SPC]
Q1141	2SA2012	TRANSISTOR	1	[SPC]
Q1142	2SD601A-RSTX	TRANSISTOR	1	2SD0601AHL [SPC]
Q1155	B1DGDD000002	TRANSISTOR	1	[SPC]
Q2001	2SD1819ATX	TRANSISTOR	1	2SD1819A0L [SPC]
Q3221	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]
Q3226	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]
Q3231	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]
Q3236	2SB1218A-R	TRANSISTOR	1	2SB1218AR [SPC]
Q3501	2SB709A-RS	TRANSISTOR	1	[SPC]
Q3511	2SB709A-RS	TRANSISTOR	1	[SPC]
Q3551	2SC2295-BC	TRANSISTOR	1	[SPC]
Q3552	2SA1022-B	TRANSISTOR	1	2SA10220B [SPC]
Q3553	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q3561	2SC2295-BC	TRANSISTOR	1	[SPC]
Q3562	2SA1022-B	TRANSISTOR	1	2SA10220B [SPC]
Q3563	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q3571	2SC2295-BC	TRANSISTOR	1	[SPC]
Q3572	2SA1022-B	TRANSISTOR	1	2SA10220B [SPC]
Q3573	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q3761	2SA1532-BC	TRANSISTOR	1	[SPC]
Q3766	2SA1532-BC	TRANSISTOR	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q3771	2SA1532-BC	TRANSISTOR	1	[SPC]
Q4381	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4501	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4511	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4521	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4531	2SD1328	TRANSISTOR	1	2SD132806 [SPC]
Q4541	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4551	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4561	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4571	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4591	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4721,22	2SD1328	TRANSISTOR	2	2SD132806 [SPC]
Q4901	2SB709A-RS	TRANSISTOR	1	[SPC]
Q4911	2SB1434RSTA	TRANSISTOR	1	2SB14340HA [SPC]
Q4912	2SB1320A-R	TRANSISTOR	1	2SB1320ARA [SPC]
Q4913	2SD601A-R	TRANSISTOR	1	2SD0601AR [SPC]
Q4921	2SK170V-TP2	TRANSISTOR	1	B1CACE000006 [SPC]
Q4931	2SJ74V-TP2	TRANSISTOR	1	B1CCCC000003 [SPC]
Q5211	2SB1115-T	TRANSISTOR	1	B1BDBF000004 [SPC]
Q5215	2SB1115-T	TRANSISTOR	1	B1BDBF000004 [SPC]
Q5261,62	2SC3930-BC	TRANSISTOR	2	[SPC]
Q5263	2SA1532-BC	TRANSISTOR	1	[SPC]
Q5264	2SC3930-BC	TRANSISTOR	1	[SPC]
Q5271	UN5211	TRANSISTOR	1	UNR5211 [SPC]
Q6001	2SD1996-R	TRANSISTOR	1	2SD19960RA [SPC]
Q6071	2SD1992A-R	TRANSISTOR	1	[SPC]
Q6215	UN5212	TRANSISTOR	1	UNR5212 [SPC]
QR1115	UN4213	TRANSISTOR	1	UNR4213 [SPC]
QR1155	UN4213	TRANSISTOR	1	UNR4213 [SPC]
QR3521	UN2212	TRANSISTOR	1	UNR2212 [SPC]
QR4201	UN2111	TRANSISTOR	1	UNR2111 [SPC]
QR4202	UN2215	TRANSISTOR	1	UNR2215 [SPC]
QR4381	UN2211	TRANSISTOR	1	UNR2211 [SPC]
QR4382	UN2111	TRANSISTOR	1	UNR2111 [SPC]
QR4591	UN2211	TRANSISTOR	1	UNR2211 [SPC]
QR4593	UN2211	TRANSISTOR	1	UNR2211 [SPC]
QR4594	UN2111	TRANSISTOR	1	UNR2111 [SPC]
QR5221	UN2121	TRANSISTOR	1	[SPC]
QR5241	UN511M	TRANSISTOR	1	[SPC]
QR6003	DTC123JK-T96	TRANSISTOR	1	[SPC]
R1031,32	ERDS2FJ124	1/4W 120K	2	[SPC]
R1041,42	ERDS2TJ474	1/4W 470K	2	[SPC]
R1043	ERG2SJ560	2W 56	1	[SPC]
R1051	ERDS2TJ750	1/4W 75	1	[SPC]
R1052	ERDS2TJ2R2	1/4W 2.2	1	[SPC]
R1053	ERDS2TJ331	1/4W 330	1	[SPC]
R1054	ER0S2CKG6800	1/4W 680	1	[SPC]
R1061	ERDS2TJ103	1/4W 10K	1	[SPC]
R1062	ERDS2TJ514	1/4W 510K	1	[SPC]
R1063	ERDS2TJ474	1/4W 470K	1	[SPC]
R1064	ERDS2TJ153	1/4W 15K	1	[SPC]
R1065	ERDS2TJ332	1/4W 3.3K	1	[SPC]
R1066	ERDS2TJ473	1/4W 47K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1101	ERDS2TJ750	1/4W 75	1	[SPC]
R1102,03	ER0S2CKF1201	1/4W 1.2K	2	[SPC]
R1104	ERDS2TJ561	1/4W 560	1	[SPC]
R1105	ERDS2TJ271	1/4W 270	1	[SPC]
R1106	ERDS2TJ392	1/4W 3.9K	1	[SPC]
R1107	ERDS2TJ472	1/4W 4.7K	1	[SPC]
R1115	ERDS2TJ104	1/4W 100K	1	[SPC]
R1116	ERDS2TJ102	1/4W 1K	1	[SPC]
R1120	ERJ3GEYJ823	1/16W 82K	1	[SPC]
R1121	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R1124	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R1125	ERDS2TJ101	1/4W 100	1	[SPC]*1
R1125	ERJ3GEYJ683	1/16W 68K	1	[SPC]*2
R1126	ER0S2CKF1201	1/4W 1.2K	1	[SPC]*1
R1126	ERJ3GEYJ752	1/16W 7.5K	1	[SPC]*2
R1127	ER0S2CKF1201	1/4W 1.2K	1	[SPC]*1
R1127	ERJ3RBD123	1/16W 12K	1	[SPC]*2
R1128	ERJ3RBD303	1/16W 30K	1	ERJ3RBD303V [SPC]
R1129	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R1130	ERJ3GEYJ752	1/16W 7.5K	1	[SPC]
R1133	ERJ8GEYJR56	1/8W 0.56	1	[SPC]
R1141	ERJ6GEYJ681	1/10W 680	1	[SPC]
R1142	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R1143,44	ERJ8GEYJR56	1/8W 0.56	2	[SPC]
R1151	ERDS2TJ151	1/4W 150	1	[SPC]
R1152	ERDS2TJ222	1/4W 2.2K	1	[SPC]
R1155	ERDS2TJ104	1/4W 100K	1	[SPC]
R1156	ERDS2TJ102	1/4W 1K	1	[SPC]
R1161	ERDS2TJ104	1/4W 100K	1	[SPC]
R1181	ERDS2TJ101	1/4W 100	1	[SPC]
R2020	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R2021	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R2022,23	ERJ3GEYJ752	1/16W 7.5K	2	[SPC]
R2025,26	ERJ3GEYJ223	1/16W 22K	2	[SPC]
R2027,28	ERJ3GEYJ563	1/16W 56K	2	[SPC]
R2029,30	ERJ3GEYJ102	1/16W 1K	2	[SPC]
R2031,32	ECUX1H331JCV	50V 330P	2	F1H1H3310005 [SPC]
R2033	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R2034	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R2035	ERJ3GEYJ272	1/16W 2.7K	1	[SPC]
R2036	ERJ3GEY0R00	1/16W 0	1	[SPC]
R2037	ERJ3GEYJ683	1/16W 68K	1	[SPC]
R2038	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R2039	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R2040,41	ERJ3GEYJ822	1/16W 8.2K	2	[SPC]
R2042-46	ERJ3GEYJ153	1/16W 15K	5	[SPC]
R2047,48	ERJ3GEYJ475	1/16W 4700K	2	[SPC]
R2049	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R2051,52	ERJ3GEYJ101	1/16W 100	2	D0GB101JA002 [SPC]
R2053,54	ERJ3GEYJ473	1/16W 47K	2	[SPC]
R2501-03	ERJ3GEY0R00	1/16W 0	3	[SPC]
R2504,05	ERJ3GEYJ101	1/16W 100	2	D0GB101JA002 [SPC]
R2506	ERJ3GEY0R00	1/16W 0	1	[SPC]
R3001	ERJ3GEYJ220	1/16W 22	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3002	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R3006,07	ERJ3GEY0R00	1/16W 0	2	[SPC]
R3012	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3013	ERJ3GEYJ684	1/16W 680K	1	D0GB684JA002 [SPC]
R3014-16	ERJ3GEYJ101	1/16W 100	3	D0GB101JA002 [SPC]
R3017	ERJ3GEYJ684	1/16W 680K	1	D0GB684JA002 [SPC]
R3018	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3031	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3061	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R3091,92	ERJ3GEYG223	1/16W 22K	2	[SPC]
R3093	ERJ3GEYJ333	1/16W 33K	1	[SPC]
R3094	ERJ3GEYJ153	1/16W 15K	1	[SPC]
R3095	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R3096	ERJ3GEYJ273	1/16W 27K	1	[SPC]
R3097	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R3098	ERJ3GEYJ273	1/16W 27K	1	[SPC]
R3201,02	ERJ3GEYJ101	1/16W 100	2	D0GB101JA002 [SPC]
R3203	ERJ3GEYJ821	1/16W 820	1	[SPC]
R3204	ERJ3GEYJ221	1/16W 220	1	[SPC]
R3205	ERJ3RBD201	1/16W 200	1	[SPC]
R3207	ERJ3RBD511	1/16W 510	1	[SPC]
R3221	ERJ3GEYJ820	1/16W 82	1	[SPC]
R3222	ERJ3GEYJ221	1/16W 220	1	[SPC]
R3223	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3224	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3226	ERJ3GEYJ151	1/16W 150	1	[SPC]
R3227	ERJ3GEYJ221	1/16W 220	1	[SPC]
R3228	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3229	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3231	ERJ3RBD221	1/16W 200	1	[SPC]
R3232	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3233	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3236	ERJ3RBD221	1/16W 200	1	[SPC]
R3237	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3238	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3241	ERJ3RBD221	1/16W 200	1	[SPC]
R3261	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3501	ERJ3GEYJ621	1/16W 620	1	[SPC]
R3502	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3503	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3511	ERJ3GEYJ561	1/16W 560	1	[SPC]
R3512	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R3513	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3521	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R3526	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3531	ERJ3GEYG102	1/16W 1K	1	[SPC]
R3532	ERJ3GEYG112	1/16W 1.1K	1	[SPC]
R3533	ERJ3GEYG102	1/16W 1K	1	[SPC]
R3534	ERJ3GEYG511	1/16W 510	1	[SPC]
R3535	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3543,44	ERJ3EKF75R0V	3W 75	2	[SPC]
R3545,46	ERJ3EKF78R7V	3W 78.7	2	[SPC]
R3551	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R3552	ERJ3GEYJ471	1/16W 470	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3553	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R3554	ERJ3GEYJ331	1/16W 330	1	[SPC]
R3555	ERJ3GEYJ301	1/16W 300	1	[SPC]
R3556	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3557	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3558	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3559	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3561	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R3562	ERJ3GEYJ471	1/16W 470	1	[SPC]
R3563	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R3564,65	ERJ3GEYJ331	1/16W 330	2	[SPC]
R3566	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3567	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3568	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3569	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3571	ERJ3GEYJ183	1/16W 18K	1	[SPC]
R3572	ERJ3GEYJ471	1/16W 470	1	[SPC]
R3573	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R3574,75	ERJ3GEYJ331	1/16W 330	2	[SPC]
R3576	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3577	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3578	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3579	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3581	ERJ3EKF68R0V	3W 68	1	[SPC]
R3582,83	ERJ3EKF75R0V	3W 75	2	[SPC]
R3701	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R3702	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R3703,04	ERJ3GEYJ101	1/16W 100	2	D0GB101JA002 [SPC]
R3731-33	ERJ3GEYJ103	1/16W 10K	3	[SPC]
R3738-40	ERJ3GEYJ103	1/16W 10K	3	[SPC]
R3751,52	ERJ3GEYJ101	1/16W 100	2	D0GB101JA002 [SPC]
R3753	ERJ3RBD152	1/16W 1.5K	1	[SPC]
R3754,55	ERJ3RBD102	1/16W 1K	2	[SPC]
R3756	ERJ3RBD391	1/16W 390	1	ERJ3RBD391V [SPC]
R3761	ERJ3RBD221	1/16W 200	1	[SPC]
R3762	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3763	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3766	ERJ3RBD221	1/16W 200	1	[SPC]
R3767	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3768	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3771	ERJ3GEYJ151	1/16W 150	1	[SPC]
R3772	ERJ3GEYJ221	1/16W 220	1	[SPC]
R3773	ERJ3GEYJ330	1/16W 33	1	[SPC]
R3774	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R3904	ERJ3GEY0R00	1/16W 0	1	[SPC]
R4211	ERJ3GEYJ331	1/16W 330	1	[SPC]
R4221	ERJ3GEYJ331	1/16W 330	1	[SPC]
R4231	ERJ3GEYJ331	1/16W 330	1	[SPC]
R4241	ERJ3GEYJ331	1/16W 330	1	[SPC]
R4261-63	ERJ3GEYJ103	1/16W 10K	3	[SPC]
R4301	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4302	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4303	JAR1220P562D	1/10W 5600	1	[SPC]
R4304	JAR1220P392D	1/10W 3.9K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4305,06	JAR1220P682D	1/10W 6800	2	D0HD682ZA002 [SPC]
R4307	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4308,09	JAR1220P153D	1/10W 15K	2	[SPC]
R4311	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4312	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4313	JAR1220P562D	1/10W 5600	1	[SPC]
R4314	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4317	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4321	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4322	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4323	JAR1220P103D	1/10W 10K	1	[SPC]
R4324	JAR0816P822D	8200	1	D0HB822ZA002 [SPC]
R4325-27	ERJ3GEYJ473	1/16W 47K	3	[SPC]
R4331	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4332	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4333	JAR1220P103D	1/10W 10K	1	[SPC]
R4334	JAR0816P822D	8200	1	D0HB822ZA002 [SPC]
R4337	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4341	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4342	JAR1220P472D	1/10W 4700	1	[SPC]
R4343	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4344	JAR1220P203D	1/10W 20K	1	[SPC]
R4347	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4351	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4352	JAR1220P472D	1/10W 4700	1	[SPC]
R4353	JAR1220P392D	1/10W 3.9K	1	[SPC]
R4354	JAR1220P203D	1/10W 20K	1	[SPC]
R4357	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4361	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4362	JAR1220P472D	1/10W 4700	1	[SPC]
R4363	JAR0816P392D	3900	1	D0HB392ZA002 [SPC]
R4364	JAR1220P203D	1/10W 20K	1	[SPC]
R4367	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4371	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R4372	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R4373	D0HB823ZA002	50V 0.082U	1	[SPC]
R4374	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R4375	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R4376	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R4377	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R4378	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R4381	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R4501	JAR1220P821D	1/10W 820	1	[SPC]
R4502	JAR1220P221D	1/10W 220	1	[SPC]
R4503	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4511	JAR1220P821D	1/10W 820	1	[SPC]
R4512	JAR1220P221D	1/10W 220	1	[SPC]
R4513	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4521	JAR1220P821D	1/10W 820	1	[SPC]
R4522	JAR1220P221D	1/10W 220	1	[SPC]
R4523	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4531	JAR1220P821D	1/10W 820	1	[SPC]
R4532	JAR1220P221D	1/10W 220	1	[SPC]
R4533	ERJ3GEYJ821	1/16W 820	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4541	JAR1220P821D	1/10W 820	1	[SPC]
R4542	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4543	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4551	JAR1220P821D	1/10W 820	1	[SPC]
R4552	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4553	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4561	JAR1220P821D	1/10W 820	1	[SPC]
R4562	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4563	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4571	ERJ6GEYJ821	1/10W 820	1	[SPC]
R4572	ERJ3GEYJ221	1/16W 220	1	[SPC]
R4573	ERJ3GEYJ821	1/16W 820	1	[SPC]
R4590	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R4591	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R4594	ERJ8GEYJ102	1/8W 1K	1	[SPC]
R4596	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R4598	ERJ6GEYJ222	1/10W 2.2K	1	[SPC]
R4721,22	ERJ3GEYJ471	1/16W 470	2	[SPC]
R4723,24	ERJ3GEYJ821	1/16W 820	2	[SPC]
R4731,32	ERJ8GEYJ470	1/8W 47	2	[SPC]
R4733,34	ERJ3GEYJ153	1/16W 15K	2	[SPC]
R4735,36	ERJ3GEYJ123	1/16W 12K	2	[SPC]
R4737,38	ERJ3GEYJ102	1/16W 1K	2	[SPC]
R4761	ERJ3GEYJ100	1/16W 10	1	[SPC]
R4771	ERJ6GEYJ750	1/10W 75	1	[SPC]
R4901	ERJ6RBD822	1/10W 8.2K	1	[SPC]
R4902	ERJ6RBD152	1/10W 1.5K	1	[SPC]
R4903	ERJ6GEYJ333	1/10W 33K	1	[SPC]
R4911	ERJ6RBD822	1/10W 8.2K	1	[SPC]
R4912	ERJ6GEYJ331	1/10W 330	1	[SPC]
R4913	ERJ6GEYJ103	1/10W 10K	1	[SPC]
R4921	ERJ6GEYJ561	1/10W 560	1	[SPC]
R4922	ERJ6GEYJ105	1/10W 1M	1	[SPC]
R4931	ERJ6GEYJ561	1/10W 560	1	[SPC]
R4932	ERJ6GEYJ105	1/10W 1M	1	[SPC]
R5001,02	ERJ3GEYJ560	1/16W 56	2	[SPC]
R5211	ERJ3GEYJ2R2	1/16W 2.2	1	[SPC]
R5212	ERJ12YJ270	1/2W 27	1	[SPC]
R5213	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R5214	ERJ3GEYJ223	1/16W 22K	1	[SPC]
R5215	ERJ3GEYJ2R2	1/16W 2.2	1	[SPC]
R5216	ERJ12YJ270	1/2W 27	1	[SPC]
R5217	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R5221	ERJ3GEY0R00	1/16W 0	1	[SPC]
R5231,32	ERJ3GEYJ822	1/16W 8.2K	2	[SPC]
R5233	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R5241	ERJ3GEYJ221	1/16W 220	1	[SPC]
R5242	ERJ3GEYJ823	1/16W 82K	1	[SPC]
R5256	ERJ3GEYF223	1/16W 22K	1	[SPC]
R5257	ERJ3GEYJ182	1/16W 1.8K	1	[SPC]
R5258	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R5261,62	ERJ3GEYJ561	1/16W 560	2	[SPC]
R5263	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R5264	ERJ3GEYJ103	1/16W 10K	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R5265	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R5266	ERJ3GEYJ563	1/16W 56K	1	[SPC]
R5267	ERJ3GEYJ334	1/16W 330K	1	D0GB334JA002 [SPC]
R5268	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R5269	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R5270	ERJ3GEYJ273	1/16W 27K	1	[SPC]
R5271,72	ERJ3GEY0R00	1/16W 0	2	[SPC]
R5281,82	ERJ3GEYJ105	1/16W 1M	2	[SPC]
R5284	ERJ3GEYJ563	1/16W 56K	1	[SPC]
R5286,87	ERJ3GEYJ680	1/16W 68	2	ERJ3GEYJ680V [SPC]
R5288	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R5289	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R5290	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R5291	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R5292	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R5293	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R5294	ERJ3GEYJ562	1/16W 5.6K	1	[SPC]
R5295	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R5296	ERJ3GEYJ332	1/16W 3.3K	1	[SPC]
R5297	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R5299	ERJ3GEYJ101	1/16W 100	1	D0GB101JA002 [SPC]
R5300	ERJ3GEYJ332	1/16W 3.3K	1	[SPC]
R5301	ERJ3GEYJ563	1/16W 56K	1	[SPC]
R6003	ERJ3GEYJ331	1/16W 330	1	[SPC]
R6005-07	ERJ3GEYJ103	1/16W 10K	3	[SPC]
R6008	ERJ3GEY0R00	1/16W 0	1	[SPC]
R6009	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6010	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]
R6011-23	ERJ3GEYJ473	1/16W 47K	13	[SPC]
R6024	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6025-38	ERJ3GEYJ473	1/16W 47K	14	[SPC]
R6039	ERJ3GEY0R00	1/16W 0	1	[SPC]
R6040	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6041	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6042,43	ERJ3GEYJ102	1/16W 1K	2	[SPC]
R6044	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6047	ERJ3GEYJ221	1/16W 220	1	[SPC]
R6048	ERJ3GEYJ303	1/16W 30K	1	[SPC]
R6049	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6053-56	ERJ3GEYJ473	1/16W 47K	4	[SPC]
R6057-59	ERJ3GEYJ103	1/16W 10K	3	[SPC]
R6062,63	ERJ3GEYJ331	1/16W 330	2	[SPC]
R6064	ERJ3GEYJ221	1/16W 220	1	[SPC]
R6067,68	ERJ3GEYJ473	1/16W 47K	2	[SPC]
R6071	ERJ6GEYJ221	1/10W 220	1	[SPC]
R6101	ERJ3GEYJ332	1/16W 3.3K	1	[SPC]
R6102	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R6103	ERJ3GEYJ152	1/16W 1.5K	1	[SPC]
R6104	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]
R6105	ERJ3GEYJ221	1/16W 220	1	[SPC]
R6201	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]*4
R6201	ERJ3GEYJ473	1/16W 47K	1	[SPC]*3
R6202	ERJ3GEYJ103	1/16W 10K	1	[SPC]*3
R6202	ERJ3GEYJ122	1/16W 1.2K	1	[SPC]*4

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6203	ERJ3GEYJ103	1/16W 10K	1	[SPC]*3
R6203	ERJ3GEYJ152	1/16W 1.5K	1	[SPC]*4
R6204	ERJ3GEYJ222	1/16W 2.2K	1	[SPC]
R6205	ERJ3GEYJ103	1/16W 10K	1	[SPC]*3
R6205	ERJ3GEYJ332	1/16W 3.3K	1	[SPC]*4
R6206	ERJ3GEYJ103	1/16W 10K	1	[SPC]*3
R6206	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*4
R6207	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]*3
R6207	ERJ3GEYJ682	1/16W 6.8K	1	[SPC]*4
R6208	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R6209	ERJ3GEYJ473	1/16W 47K	1	[SPC]
R6210	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6211	ERJ3GEYJ472	1/16W 4.7K	1	[SPC]
R6215	ERJ3GEYJ103	1/16W 10K	1	[SPC]
R6216	ERJ3GEYJ102	1/16W 1K	1	[SPC]
R6501	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R6502	ERJ3RBD221	1/16W 200	1	[SPC]
R6503	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R6521	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R6522	ERJ3RBD221	1/16W 200	1	[SPC]
R6523	ERJ3GEYJ104	1/16W 100K	1	[SPC]
R6561	ERJ3GEYJ105	1/16W 1M	1	[SPC]
R6562	ERJ3RBD331	1/16W 330	1	[SPC]
R6801	ERJ3GEYJ473	1/16W 47K	1	[SPC]
RA2021	EXBV4V102J	RESISTOR-RESISTOR	1	D1H41022A001 [SPC]
RA2022	EXBV4V472J	RESISTOR-RESISTOR	1	[SPC]
RA2501	EXBV8V473J	RESISTOR-RESISTOR	1	EXBV8V473JV [SPC]
RA3001	EXBV4V102J	RESISTOR-RESISTOR	1	D1H41022A001 [SPC]
RA3002-08	EXBV8V820J	RESISTOR-RESISTOR	7	[SPC]
RA3031-33	EXBV4VR000	RESISTOR-RESISTOR	3	[SPC]
RA3201,02	EXBV8V103J	RESISTOR-RESISTOR	2	D0GZ103J0001 [SPC]
RA3701	EXBV4V472J	RESISTOR-RESISTOR	1	[SPC]
RA3702	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA3703-05	EXBV8V103J	RESISTOR-RESISTOR	3	D0GZ103J0001 [SPC]
RA3751,52	EXBV8V471J	RESISTOR-RESISTOR	2	EXBV8V471JV [SPC]
RA3753	EXBV4V471J	RESISTOR-RESISTOR	1	D1H447120001 [SPC]
RA3754,55	EXBV8V471J	RESISTOR-RESISTOR	2	EXBV8V471JV [SPC]
RA3756	EXBV4V471J	RESISTOR-RESISTOR	1	D1H447120001 [SPC]
RA3757,58	EXBV8V471J	RESISTOR-RESISTOR	2	EXBV8V471JV [SPC]
RA3759,60	EXBV4V471J	RESISTOR-RESISTOR	2	D1H447120001 [SPC]
RA3905,06	EXBV8V471J	RESISTOR-RESISTOR	2	EXBV8V471JV [SPC]
RA5001	EXBV4V560J	RESISTOR-RESISTOR	1	[SPC]
RA5002,03	EXBV8V560J	RESISTOR-RESISTOR	2	[SPC]
RA5201	EXBV8V101J	RESISTOR-RESISTOR	1	[SPC]
RA6201,02	EXBV4V103J	RESISTOR-RESISTOR	2	EXBV4V103JV [SPC]
RA6203	EXBV4V472J	RESISTOR-RESISTOR	1	[SPC]
RA6204	EXBV4V103J	RESISTOR-RESISTOR	1	EXBV4V103JV [SPC]
RA6205	EXBV8V103J	RESISTOR-RESISTOR	1	D0GZ103J0001 [SPC]
RA6206	EXBV4V473J	RESISTOR-RESISTOR	1	EXBV4V473JV [SPC]
RY4201	VSY2180	RELAY	1	[SPC]
S6101	EVQ11G07K	SWITCH(525P)	1	[SPC]
S6102	EVQ11G07K	SWITCH(AUDIO ONLY)	1	[SPC]
S6103	EVQ11G07K	SWITCH(RE-MASTER)	1	[SPC]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
S6104	EVQ11G07K	SWITCH(POWER)	1	[SPC]
S6201	EVQ11G07K	SWITCH(PAUSE)	1	[SPC]
S6202	EVQ11G07K	SWITCH(FWD-SKIP)	1	[SPC]
S6203	EVQ11G07K	SWITCH(OPEN/CLOSE)	1	[SPC]
S6204	EVQ11G07K	SWITCH(PLAY)	1	[SPC]
S6205	EVQ11G07K	SWITCH(RVS-SKIP)	1	[SPC]
S6206	EVQ11G07K	SWITCH(STOP)	1	[SPC]
S6207	EVQ11G07K	SWITCH(GROUP)	1	[SPC]
S6208	EVQ11G07K	SWITCH(DNR)	1	[SPC]
SW2601	RSH1A048-A	DOUBLE SWITCH	1	[SPC]
T1021	ETS28AV135AC	TRANSFORMER	1	[SPC]
T4761	VLQ0790	TRANSFORMER	1	G4BYB0000001 [SPC]
VR3221	VRV0293B201T	V.RESISTOR(C ADJ)	1	[SPC]
VR3225	VRV0293B201T	V.RESISTOR(Y ADJ)	1	[SPC]
VR3771	VRV0293B201T	V.RESISTOR(Y/G ADJ)	1	[SPC]
VR4721	EVJCAEF01A14	V.RESISTOR(HP)	1	[SPC]
X6001	H2B800400007	CERAMIC OSCILLATOR	1	[SPC]
X6501	VSX1044	CRYSTAL OSCILLATOR	1	H0J368500003 [SPC]
X6521	VSX1045	CRYSTAL OSCILLATOR	1	H0J338500008 [SPC]
X6561	VSX0944	CRYSTAL OSCILLATOR	1	H0J270500012 [SPC]

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ORDER No.ODSD010526S1

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Service Manual

DVD Player

DVD-RP91

Colour

(N).....Shampagne Gold Type

(K).....Black Type

Area

(D).....U.S.A. and Canada.

Cabinet colour for the DVD-RP91 (D), Black cabinet has been newly added as well as Shampagne Gold.
Please file and use this supplement manual together with the service manual for Model No.DVD-RP91D, Order No.ODSD010305C1.

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Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1. Change in Replacement Parts List

Note:

***Mentioned in this parts list is only those different from Model No. DVD-RP91D-N.**

All other parts are the same as for DVD-RP91D-N.
***All parts that are supplied by S.P.C..**

Ref. No.	Change of Part No.		Part Name & Description	Pcs	Rer
	DVD-RP91D-N	DVD-RP91D-K			
CASING PARTS AND MECHANISM					
1	RKM0437-N	RKM0450-K	TOP COVER	1	
3	VHD1094	VHD1041	SCREW	4	
10	RYF0570-N	RYF0570-K	TRAY TOP	1	
16	RYP0969A-N	RYP0969-K	FRONT PANEL ASS'Y 1	1	
16-1	RGU1930-N	RGU1930-K	OPERATION BUTTON	1	
16-2	RGU1931-N	RGU1931-K	AUDIO BUTTON	1	
16-3	RGU1932-N	RGU1932-K	POWER BUTTON	1	
37	RGQ0290-N	RGQ0290-K	SIDE COVER(L)	1	
38	RGQ0291-N	RGQ0291-K	SIDE COVER(R)	1	
42	VGU8354	RGW0048-K	VOLUME KNOB	1	
PACKING AND ACCESSORIES					
A1	N2QAJB000015	N2QAJB000032	REMOTE CONTROL ASS'Y	1	
A1-1	103RRC19901R	103RRC19903R	BATTERY COVER	1	
PC1	RPG5243	RPG5603	PACKING CASE	1	

ORDER NO. ODSD010732S0

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Service Manual

DVD Player

DVD-RA71 / DVD-RP91

Areas

A.....Oceania. (RA71 Only)

D.....U.S.A. and Canada. (RP91 Only)

E.....Europe. (RA71 Only)

EB...Great Britain. (RA71 Only)

EG...Germany and Poland, etc. (RA71 Only)

EN...Asia. (RA71 Only)

Correction of Description

Please file and use this supplement manual together with the service manual for / Model No. DVD-RA71A, Order No. ODSD010525C3 / Model No. DVD-RA71E/EB/EG, Order No. ODSD010304C2 / Model No. DVD-RA71EN, Order No. ODSD010527C3 / Model No. DVD-RP91D, Order No. ODSD010305C1

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1. Service Tools and Equipment (DVD-RA71 Only)

JGS0100

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	JGS0098
	Extension cable (module P.C.B. to mother P.C.B.)	VUC8026
	Extension cable (module P.C.B. to mother P.C.B.)	RFKZ0097
	Extension cable (module P.C.B. to mother P.C.B.)	VUC8026
Others	Screw lock	RZZ0L01
	Grease	RFKXGAK152
	Oil	RFKXGA1280, JZS0648
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD5TV001

2. Service Tools and Equipment (DVD-RP91 Only)

JGS0100

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	Hex wrench	
Inspection	Extension cable (module P.C.B. to mother P.C.B.)	JGS0098
	Extension cable (module P.C.B. to mother P.C.B.)	~~JFKZ0098~~
	Extension cable (module P.C.B. to mother P.C.B.)	RFKZ0097
	Extension cable (module P.C.B. to mother P.C.B.)	VUC8026
Others	Screw lock	RZZ0L01
	Grease	RFKXGAK152
	Oil	RFKXGA1280, JZS0648
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD5TR001

RFKZ0098

List of the Extention Cables

①	JGS0098	26pins	PS4201 (Module P.C.B.)–PP4201 (Mother P.C.B.)
②	~~JFKZ0098~~	18pins	PS6202 (Module P.C.B.)–PP6001 (Mother P.C.B.)
③	RFKZ0097	10pins	PS3201 (Module P.C.B.)–PP3201 (Mother P.C.B.)
④	VUC8026	14pins	PS6251 (Module P.C.B.)–PP1102 (Mother P.C.B.)

RFKZ0098

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